The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. LXI, No. 1 CHICAGO, ILLINOIS JULY 5, 1913

THE SURGEON AND THE RESEARCH LABORATORY *

A. F. JONAS, M.D.

OMAHA

The advance of modern medicine and surgery is due to the casting off of the garments of preconceived hypotheses of bygone ages; a contempt for philosophic dogmas and a disregard for systems of practice not founded on the observations and elucidation of natural phenomena that are governed by definite and fixed laws. These laws have been revealed to us by scientific research, so that speculation by induction had to give way to a science based on objective observation. As our science broadened and became well founded, the art of surgery became highly developed, so much so that its operative possibilities appeared almost limitless. We must agree with David Starr Jordan when he says: "All art is based on science. Science is human experience tested and set in order. Art is knowledge in action. An art which is not based on knowledge becomes a mystery or trade. Sound medicine must rest on science."

While we have progressed in a marvelous degree during the last half-century, we cannot but feel that we still have much to do. We must confess that in many ways we have only begun. There remain so many questions on which we have no light, we therefore come together often to compare our views.

One of the purposes of this Section is to record our work, to exchange ideas and to study the collective experiences of this body. We interrupt our daily work in order that we may come together and review our labors, to thrash out problems, to retain the useful and to discard the impractical. We aim to strengthen the underlying surgical principles and to make our practical achievements more efficient.

When we consider the work of the various sections of this Association, we find that their work falls into two large and distinct groups. We find that to the first group belong the purely scientific and fundamental studies, namely, anatomy, physiology, chemistry, pathology and its coordinate divisions of histology and bacteriology. These are purely research and experimental and yet fundamental. To the second group belong the sections of the practice of medicine and surgery and its many subdivisions. I may say the divisions of applied science—the application of scientific principles to the practice and art of medicine and surgery. To the first division belong the men who devote themselves entirely to the unraveling of basic problems and the teaching of principles.

While modern medicine and surgery has its body of research men, whose labors have been entirely of a research and philosophic character, men whose labors have largely laid the foundations for the modern superstructure of the art of surgery, there is a large class of investigators who combine the art of their practice with laboratory research—men whose inspirations came to them during their daily labors in the operating-room and at the bedside, where practical observations are made that, sometimes, suggest certain theoretic solutions, the verification of which are found in experimental research; this developed the practical surgeon who solved his own problems in the laboratory. Then there are those surgeons whose daily labors are so burdensome and whose time is so completely taken up with practical work that the solution of many highly important questions is delegated to laboratory specialists. Besides there are those whose daily labors consume their energy and time to such an extent that no time is left for research work or even for thought. Their practical experiences, and often valuable obesrvations, are lost to the profession. These men neither publish nor publicly discuss their methods. There are still others who fail to share the results of their experience not only because of lack of time, but either on account of lack of training in recording, classifying and analyzing their material, or because their interest in medicine and surgery is pecuniary rather than scientific. Often their profession is to them a bread-and-butter affair and not one of a progressive science.

Briefly, we have the specialist in research work, who devotes all his time to the laboratory; the practical surgeon, who verifies his conceptions in the laboratory; the busy surgeon, who delegates the solution of his surgical concepts to the research specialist; the surgeon who has neither time nor inclination to record or discuss his work, and the surgeon who is often a simple technician, who is not troubled by anatomy, pathology, etiology or diagnosis, whose whole stock in trade is rapidity of movement, and who glories in the large number of cases that pass through his hands.

We have another class, an ever-increasing class, which is preponderant in our section, whose contributions comprise a record of applied surgical science; of a critical analysis of certain surgical principles applied to definite pathologic findings at the operating-table; of a clear understanding of infections which has so broadened the field for surgical endeavor that many operators now group their special cases, affecting certain organs, by the dozen, hundreds, and in some instances by the thousands, that they may be enabled to make their deductions with precision. Some of these operators are associated with pathologists of the highest order, men who study a living pathology both at the operating table and in an adjoining laboratory. The immediate investigation of living tissue has become a common practice,

* Chairman's Address before the Section on Surgery of the American Medical Association at the Sixty-Fourth Annual Session, held at Minneapolis, June, 1913.

268405

making operative methods more precise, and the limitations of surgical possibilities better understood.

Surgery, then, has become more and more an exact science and its practice a highly specialized art. It became more an exact science because, like every other science, it was built up by the accumulation of unquestioned facts from contributions the world over. Philosophic deductions and preconceived theories and hypotheses into which facts were made to fit could not stand the test of a progressive science.

Still, we are not unmindful of the fact that the human machine involves many unsolved complex problems in the biology of a living organism. The mechanic has before him a less difficult task in the construction of a machine, and yet even he finds idiosyncrasies in many of his mechanisms that are built after the same model. He sometimes searches long before he locates and corrects a defect.

The surgeon, working under modern methods, can state in percentages the chances for restoration of function and the preservation of life in a large majority of surgical cases. But there remain many conditions in which the outcome is uncertain and in which the factors of safety are not fully understood. It is for the solution of these undetermined questions that the research laboratory is indispensable and the highly trained research specialist a necessity.

While the surgeon is thoroughly familiar with many factors that may operate for and against a favorable outcome, there still remain many unknown factors, in a large proportion of cases, that are difficult to estimate in given cases, and which affect the operative possibilities—factors that are not apparent at the time; consequently the operator often deals with unknown conditions, so that he cannot accurately estimate whether the task can be successfully accomplished or not. There remains to be worked out, therefore, many problems, biologic in character, that can be done only by highly trained laboratory workers, who must closely cooperate with the practical surgeon. The laboratory data, to be of practical value, must agree with the findings on the operating-table. The surgeon makes his observations on the living subject; the laboratory must elucidate and make them clear. The solution must be scientific. The methods of past ages have been speculative, which created, by induction, a philosophy that was often based on a very slender foundation of facts; facts that were often made to fit the philosophy. Our modern methods begin in the opposite direction, they consist of observation of natural phenomena. Preconceived ideas must give way to objective observations.

Much is required of the modern surgeon in the clear analysis of biologic detail. Therefore we must approach our problems in a scientific spirit. In order to do this we should be scientific investigators of the highest training. There should be a thorough knowledge of laboratory technic in all its details.

It becomes evident at once that this is not always possible. Surgeons who possess the highest and best skill, whose operative technic is beyond criticism, whose pathologic and diagnostic attainments are of the highest order, often men who have been pathfinders, can devote little or no time to laboratory research. Their time is completely absorbed with operative and hospital work and other professional duties. Their practical contributions have been of the highest value. Their theoretical deductions may have been right or wrong; only the research laboratory, in many instances, can determine the truth.

It may be said that all surgeons should command a thorough laboratory skill and the younger generation does. The leading medical schools insist that each student must have a thorough laboratory training that inculcates the scientific habit of thought and practice. He is encouraged to investigate unknown fields. To collect and correlate and analyze biologic, pathologic and technical data. He begins his professional career well trained, but, in many instances, the routine of daily duties absorbs his time, and the fatigue incident thereto unfits him for the laboratory. Perhaps his practical achievements absorb his enthusiasm. Possibly the laboratory never aroused a desire for that kind of work. Whatever the cause may be, we very soon find that the rank and file of the highly trained students cannot, or will not, devote any considerable time to research work. There remains, of the vast army of modern graduates, a small company of men who are imbued with the real scientific spirit—men whose love of the truth leads them where it may, outweighs all else. We are fortunate in that we have a growing class of such men. They often occupy positions in some of our large, well-equipped, highly organized and well-endowed hospitals.

They are often found in institutions that are controlled by or affiliated with medical schools, institutions in which there is a happy combination of hospital observation, of research work and teaching. Such an organization is capable of great good for progress. Then there is the isolated investigator whose ardor is not at all affected by his isolation. He works in solitude and alone and sometimes achieves epoch-making results. Take it all in all, the surgical profession may be divided into two groups: first, a small group, to whom we must look for progress and scientific advancement; and second, a group that composes the majority of surgeons who do the routine work of daily practice. Many of these are men of keen observation, who develop methods of practice based on clear ideas of living pathology found at the operating-table. It is true that many of our great discoveries and often epoch-making advances have been made by the practical surgeon; so thus the names of many men have become synonyms for certain procedures. Among Americans there are Ephraim McDowell and the beginning of abdominal surgery; Marion Sims and the repair of vesicovaginal fistula; Crawford Long and W. T. G. Morton and others and the discovery of anesthesia (1846); Fitz of Boston and the pathology of appendicitis (1886); Valentine Mott and the ligation of large arteries for the cure of aneurysms; Philip Syng Physick and the use of buried animal ligature and the manipulation in the reduction of dislocations; Bigelow of Boston and the reduction of hip-joint dislocation and lithotlapaxy.

Among the pioneer surgeons of this country who originated procedures may be mentioned John Warren, who in 1804 first excised the parotid gland; Dr. Dixi Crosby of Hanover, New Hampshire, who did the first interscapulothoracic amputation for the removal of the upper extremity in 1836; Wolcott of Milwaukee, who performed the first nephrectomy and Bobbs of Indianapolis, who did the first cholecystotomy. Russell of Oshkosh is credited with the first suprapubic hysterectomy for uterine fibroid. Willard Parker, in 1867, reported a number of cases of suppurative typhlitis and saved 75 per cent. of the patients. Joseph K. Swift of Easton, Penn., and Gordon Buck of New York are credited with the first use of extension and counterextension for the treatment of fracture of the femur. John Warren of Boston was the first to do cardiocentesis. John Pan-

coast did the first successful operation for extrophy of the bladder. Detmold of New York, 1849, first evacuated a brain abscess. These names comprise a few of the practical American surgeons whose skill and rare insight have established new procedures.

Here we have a host of practical men who evolved methods of practice and whose only opportunity was found in the operating-room. They had no laboratories, were not trained in research work, but they understood the problems as they presented themselves and they mastered them. They were unmindful of tradition. They created means that succeeded. They were pathfinders. The paths were opened and it became the duty of those who followed to elaborate and elucidate the unnumbered obstacles that were encountered and to solve the problems which, as surgery advanced, became more complex and more difficult of solution. The unraveling of minute changes in the grosser lesions required more refined methods of investigation. The surgeon soon found that he must have a special training or that he must have the assistance of specially trained associates. He then turned for cooperation to the laboratory specialist, whose services he found invaluable, in fact indispensable.

The laboratory worker entered into close association with the surgeon. The investigator frequently stood beside the operating surgeon and observed the living pathologic structure as it was exposed. He obtained a history antedating the removal of the diseased tissues, and he followed the later progress of the case in order to fully appreciate a pathology from its beginning to its end. He began to investigate living structures. We had too long drawn our conclusions from the findings of post-mortem material, which represented only the end results. The study of living pathology is rapidly becoming the practice. Therefore, in order that we may appreciate to the fullest extent the early tissue-changes, the investigator must cooperate closely with the operating surgeon in order that he may solve the problems for which he is especially trained. While he is working with the surgeon, he need not be deterred from the investigation of problems of his own choosing.

The one danger of the investigator, working entirely by himself, is that he may become too theoretic; therefore the benefit of more or less close association with the operating surgeon. Experience has shown that cooperation in scientific work achieves the best practical results. The practical worker needs the assistance of the theoretic departments. Science is continuously progressive. No one branch of it can stand by itself; there must be cooperation, correlation of the one with the others. In the solution of the problem the investigator should have his own way and his own methods. The surgeon may present the problem and, in a general way, indicate the methods to be followed, but he must refrain from dictation, especially as to details. Frequent criticisms on his part would be confusing to the investigator and might be detrimental to the necessary enthusiasm. The investigation may be long, it may not lead to immediate results—in fact, it may apparently lead away from the subject; there may be an accumulation of theoretic data that may appear unimportant, but a persistence, keeping ever in mind the original problems, will lead to a solution. In the course of an investigation other problems may be unraveled.

To secure training and development the research specialist must serve an apprenticeship in the laboratory. The first aim of the laboratory should be to teach the student to observe, to see, to think, to comprehend. This is the chief aim of all objective teaching which begins with the fundamentals. When these have been mastered, the work must begin in well-equipped laboratories presided over by highly trained investigators and teachers.

The clinical and laboratory instruction must continue side by side and there should be a constant agreement between the two. Should any discrepancy arise, we should cling to the clinical findings rather than to those of the laboratory, for the sake of the sufferer, until the time arrives when there is absolute harmony between bed-side findings and the laboratory. Every student should be trained in all the essentials pertaining to clinical as well as laboratory technic. The laboratory worker who ignores bed-side findings does not fulfil his mission. Among the many duties of the instructors, an important one is to take note of such pupils as excel in laboratory work, men who possess powers of accurate observation, and give them special attention and encouragement, and to select and segregate those who are particularly qualified. The qualifications for research work are: first, keenness of observation, which means unlimited repetition until the results are established, and, second, an ability to correctly interpret facts and a recognition of their relationships. "Now, it is evident that you cannot make a sound conclusion without the facts, and these are gained by observation with and without experiment. It is equally evident that an isolated fact is barren and dead. Facts are like cells of a complex animal, all interrelated, mutually affecting and affected."[1]

The student cannot become well qualified except under expert instructors; men who are, first of all, professional anatomists, physiologists, biologists and who are expert in every branch of technic pertaining to these subjects. They must have had a large experience in research work before they become instructors. The student, by the acquirement of technical skill as well as training in learning to see, to weigh evidence and apply principles to his practice, not only becomes qualified for research work but it would seem that he is better prepared to do every-day practical surgical work, if he should choose to become a surgeon. I am of the opinion that the laboratory of the medical school should have in view not only the acquirement of routine knowledge of the various subjects, but the training should have the aim of training men both for the purpose of research work and for becoming proficient in operative technic; to better prepare them for the practical duties of their profession. The first consideration in the organization of the medical school has become the selection of men. Instructors are more important than equipment. No equipment can be adequate for a purpose until we have the man who plans and selects and knows how to utilize it to the best advantage. On the other hand, no matter how good the man is, he must have at hand all material for his purpose and he must have a place in which to work. To be of the greatest assistance to the surgeon, he must have a well-equipped laboratory and library and he must be so situated that he works in close intimacy with a surgeon in a well-equipped surgical hospital. He should be able to secure his pathologic material immediately after its removal from the body, so that he may investigate fresh tissues and not be dependent altogether on embalmed material. The surgeon must give every possible assistance and deliver his material in such a condition as to

1. Lyon, E. P.: Equipment and Instruction of the Laboratory Years, THE JOURNAL A. M. A., May 27, 1911, 1539.

be most available to the pathologist for instruction and investigation.

The research laboratory should combine the features of all the other special laboratories. There should be an equipment for anatomic, physiologic, chemical, microscopic and biologic experiments. In a modern medical school in which these five special laboratories are situated in close proximity to the hospital, special research work may be conducted in one or all of them and the work may be carried from one to the other as may be necessary. As a matter of convenience, however, the work may be expedited best in a laboratory where the necessary special apparatus can be brought together.

In addition to the aforesaid special laboratories may be added a well-equipped surgical operating room where operations may be done on animals as taught in the Hunterian Laboratory of Experimental Medicine at Baltimore and the Institute for Experimental Medicine in St. Petersburg and many other institutions in this country and abroad. The principles of surgery should be taught, not special operations. The chief criticism against such surgical instruction has been that abdominal surgery has received the main attention, and that the pupils having had an operative course have been inclined to begin their practical activity with abdominal surgery.

To have all of this equipment is desirable and adds much to the convenience of the experimenter. But it must not be the first essential. The laboratory director is more important than buildings. A resourceful investigator outweighs fine apparatus. A skilled research-worker can, to a large degree, construct his own apparatus. In selecting a school, the student should ascertain whether or not it is well manned before he takes into account architecture and apparatus. As to being well manned, I mean manned with men who are patient, proficient, progressive; men who are not satisfied merely to investigate and verify what others have done, but who must advance, develop and create. Whether research worker or surgeon, or both combined in one, he must have time enough to teach and instruct the student. I have no patience with the laboratory investigator who says that he abhors the routine of teaching. No man is better qualified to teach than the one who has worked out the problem.

We must agree with Welch[2] when he says:

> A tendency at the present time to separate scientific research from the work of teaching has certain advantages, but has, I believe, even greater dangers. Scientific investigation in medicine, during the last two decades, has led to results of such vast importance as regards our power over disease that it makes an appeal to the public and to philanthropists much stronger than does medical education. Hence it is that large funds are available for institutions of research and for research hospitals which have no connection with education. Hospitals are often more eager to contribute to scientific medicine than to participate in the work of medical education and in a number of instances have been provided with funds and laboratories intended solely for scientific research. While there is room for such independent endowments and institutions, the roots of fruitful scientific work lie in the educational system, and if the latter is neglected the former will suffer. The traditional home and the most favorable environment for productive research is the university, and hospitals in affiliation with universities offer, I believe, the best opportunities for the promotion of medical science and art. Above all, the teacher should be an investigator.

2. Welch, William. The Hospital in Relation to Medical Science, The Journal A. M. A., Nov. 19, 1912, p. 1667.

If it is impossible to combine in one plant all the aforesaid special laboratories and one only can be had, then it must be admitted that the research laboratory should be in close proximity to the physiologic laboratory with trained men. Physiology is the foundation on which clinical and research work must rest; it is the beginning. Clinical work, whether medical or surgical, can have no practical results unless founded on physiology. Therefore we must have a clinical physiology (Yandell Henderson).

The labors of Brown-Séquard, Claude Bernard, Ludwig, Fritch and Hitzig were fundamentally physiologic and necessary to the elucidation of clinical conditions. Bernard's discovery of glycogen, a physiologic study, led to an understanding of diabetes. His discovery of vasomotor nerves illuminated the problem of animal heat and fevers.

Clinicians have sometimes been slow to adopt and apply to practical use methods and means of common practice in the physiologic laboratory. An example is the measurement of blood-pressure in millimeters of mercury which had been done by physiologists fifty years before it found its way to the clinician (Yandell Henderson).

Only in very recent years has the surgeon availed himself of the value of the sphygmograph. The physiologist had already accumulated an immense fund of data.

Sauerbruch and Brauer made use of what was long since common knowledge of the physiologist—knowledge that enabled them to gain access to the interior of the thorax. The work of Crile on the subject of shock was an elaboration of the physiology of the vascular and nervous system. Cushing's splendid work on the pituitary body was a physiologic and anatomic study. In this same category belonged Erlanger's work on heart-block and Cannon's studies on normal movements of the stomach and intestines, and Meltzer on intratracheal insufflation. All of Carrell's work and that of Matas and Crile on blood-vessel surgery has been physiologic. When Senn, Murphy, Halstead and Connell taught us their methods of intestinal suturing, we found it to be based on physiology.

Since all of our therapeutic endeavors are directed toward an attempt at a restoration of a disturbed or perverted function to a normal or physiologic condition, all of our experimental work must be fundamentally physiologic; and, finally, when we endeavor to use all of this work in a practical way, that is, to clinical ends, we have a clinical physiology. The more we know of physiology the more we know of clinical conditions.

The hospital laboratory should primarily cooperate with the staff in the unraveling of the nature of the diseases afflicting the inmates; in other words, in assisting and determining a diagnosis. Its other function, which may be far more important, consists in the study of undetermined problems. The laboratory staff should be so divided that one or more members should confine their time to the routine diagnostic work, which should have its own equipment and a separate laboratory. The research work should be entirely separated and have its own department. Its staff should have absolute freedom for its own work and in the working out of surgical problems. The surgeon should be consulted so that he may cooperate and aid in the studies. The surgeon is confronted, daily, by unsolved conditions; so he may suggest the kind of work to be done, and may indicate the object to be achieved. In this way the efforts of the research worker and surgeon will lead to definite ends. Crile, when he observed the disastrous effects of shock,

both traumatic and emotional, drew his own conclusions as to the underlying cause. He called to his aid his laboratory colaborers and together they determined the cell-changes in the brain.

Aside from the numberless questions pertaining to the determination of limits of safety in surgical procedures that must be worked out, such as the questions in relation to immunity and to the immense field of serology, the margin of which has only been touched, vast unknown possibilities are in store for us. The science of pathologic tissues and bacteriology are succeeded by a biochemical era. Much work has been done and an immense literature has accumulated and a vast army of earnest men have established innumerable facts in immunology and serology. Many principles have been established and yet many methods of practical application are still involved in much uncertainty; but the future will be full of revelations.

The unsolved question of the etiology of neoplasms offers an unlimited field for work. Is cancer due to a micro-organism or a perverted metabolism? Cancer seems to be increasing and why? While questions such as these are yet unanswered, an immense amount of information has accumulated. Much positive knowledge regarding its history, distribution and development; much that is more than suggestive as to its cause, and much negative evidence as to what does not cause cancer is at hand. Cancer research has been carried on with commendable activity since 1901 and 1902, when Loeb in America and Jansen in Denmark succeeded in transplanting cancer in rats and mice.

We have learned that cancer-cells may apparently grow indefinitely by transplantation through many generations. We have seen that cancer retrogresses under certain conditions; that there is such a condition as immunity to cancer; that cancer may, at times, gain in virulence. Experimental research seems to point to the cancer-cell as the real parasite rather than to a specific and distinct micro-organism. Family histories seem to point to heredity, but experimental research has taught us nothing. Mice have apparently been cured of cancer by serum therapy; what this may lead to in its application to man, is still uncertain. Coley seems to have established the principle of the cure of sarcoma by the use of serum of streptococcus and *Bacillus prodigiosus* in 10 per cent. of cases. Why the serum fails in 90 per cent. is a question for future determination. Ehrlich thinks that the beginning of the end of the cancer problem is in sight. I am sure that our optimism in relation to the eventual discovery of a cure by experimental research is well founded.

Much more might be detailed as to the great work on which the investigator has only begun. The possibilities are limitless. The work ahead is arduous and difficult. The rewards will be rich. The future of surgery and medicine will occupy a higher plane than any of which the optimist now dreams. For the present, the surgeon recognizes the necessity of the closest cooperation with the laboratory specialist. The one needs the other; both must work side by side.

106 South Thirty-First Avenue.

Need of Good Pre-Medical Education Recognized Thirteen Hundred Years ago.—"For a medical man should know the ars rhetorica, that he may be able to support with sound arguments the matters which he deals with; and also the ars dialectica, so that by the exercise of reason he may investigate the causes of sickness for the purposes of cure."—Isidorus Hispalensis, Bishop of Seville, 600 A. D.

YESTERDAY, TO-DAY AND TO-MORROW

THE ACTIVITIES OF THE COUNCIL ON PHARMACY AND CHEMISTRY *

TORALD SOLLMANN, M.D.
Professor of Pharmacology and Materia Medica, Western Reserve University Medical Department
CLEVELAND

It seems but yesterday, though it was eight years last February, that the Council on Pharmacy and Chemistry was founded by this Association, with the hope of correcting, as far as possible, the evils which were current in the field of materia medica. The story of this Council has been told repeatedly; but it seems to me worth telling again, partly because it may be new to some of the younger members at least; partly because it contains some facts and lessons which can scarcely be repeated too often; and partly because the present activities of the Council can be appreciated, and therefore can be valuable to the medical profession, only in the light of its history.

THE EXPLOITATION OF PROPRIETARY REMEDIES

The extraordinary profits derived from the sale of exclusive pharmaceutical specialties had flooded the market with such preparations. As the natural result of unrestrained competition, these were being exploited with ever increasingly extravagant claims. The relatively recent discovery of the therapeutic possibilities of the synthetic chemicals, which were patented and therefore proprietary, was used to give a pretense of scientific respectability to all kinds of uncritical statements; and under this cloak of pretended respectability the most unscientific nostrums were not slow to seek shelter. Even men of scientific training found it difficult, if not impossible, to sort this confused material by their individual efforts, and were therefore obliged to treat it more or less uncritically, and thus, directly or indirectly, wittingly or unwittingly, lend the weight of their authority to this exploitation. Much more helpless was the general practitioner. Without the training, the time or the material for discriminating study, assailed from all sides by the din of the detail man, by the laudatory "literature" of the advertising pages, the reading-matter, and even the editorial comments of respectable medical journals, he was a helpless and easy victim for the skilful proprietor.

Not content with this form of exploitation, many manufacturers used their success with the profession to introduce their remedies directly to the public under a different name, or even under the same name, with claims still more extravagant, if that were possible, and backed now by the authority of professional endorsement.

In any case, the consumer, as usual, "paid the freight," not only by paying extravagant prices for useless drugs, but even more seriously, because the uncritical habits thus engendered made for careless practice in every other respect. It may well be questioned whether the discovery of the synthetic drugs did not at that time work vastly more harm than good to the public. Their ultimate effect, of course, like that of every scientific discovery, must be useful; indeed, we are now reaping some of the genuine benefits. Then, however, the good was offset by the evils which they encouraged.

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Sixty-Fourth Annual Session, held at Minneapolis, June, 1913.

PRELIMINARY WORK OF THE COUNCIL

The individual physician, the individual scientist even, was practically helpless in this morass; and it was to be the function of the Council to extend a helping hand by doing, through concerted effort, what no single individual could do alone. I must pass over this work in a most sketchy manner, although even the details would be interesting to many of you. The task of the Council was truly herculean. The simile of the Augean stables had rarely a more apt application; and it was much to be feared that, as with the fabled Hydra, two heads would appear for each one struck off. It seemed worth while, however, to make a determined effort to sift out at least the most serious of the abuses, with the hope of clearing the field for a more careful study. That, in itself, would be a helpful and not impossible achievement. To this task the Council turned "without fear or favor," and for some time the work of the Council was a succession of exposures, so much so as to draw on the Council the reproach of sensationalism. In a sense the accusation was just, but the reproach of sensationalism did not lie with the Council, but with the frauds which it was obliged to bring to light.

NEW AND NONOFFICIAL REMEDIES

Even at this time, however, the constructive side was not neglected. You, as practitioners, wish to be warned against lies, so that you may not make your patient more ill; but still more, you wish to be informed of facts so that you may help to make him well. The Council has always regarded it as its most important task to make these facts available, and to help the practitioner to recognize what are facts and what are not. For this purpose it issued the book, New and Nonofficial Remedies, which is revised annually. This little book should be in the hands of every practitioner. It gives reliable information as to the origin and chemical and physical properties of these drugs, their composition, solubility, dosage, etc., and a brief statement of their actions and uses.

The last-named part is naturally the most unsatisfactory, for most of the newer substances are still on trial. The Council aimed to steer a conservative course, but was inclined to give the benefit of any doubt to the honest manufacturers. For this reason, the earlier editions especially contain considerable matter that was doubtful, notwithstanding the great mass of material that had been eliminated.

This elimination is still going on, and every new edition shows improvement over the last. In future the descriptions will aim to distinguish more sharply between those claims which the Council considers established and those which are admitted only tentatively as neither proved nor disproved. The claims of the manufacturers are being weighed more and more carefully, and more exacting objective evidence is being demanded. The Council is inclined to take the position that the approximate value of a new drug should be determined exhaustively, on patients as well as animals, *before* it is advertised to the profession. This requirement means generally that experiments should be made more intensively and under more exacting conditions. The general practitioner should not be called on to do the preliminary trying-out of new remedies. Experiences gathered in private practice are by no means without value, but their value is uneven, and it takes too long to arrive at a safe judgment on the basis of scattered observations.

In all this work the sincere cooperation of the manufacturers would be of the highest value, and many firms have shown a most laudable desire to extend this cooperation. Others, however, apparently fail to recognize that the Council is endeavoring to secure improvements which will finally redound to the benefit of every honest manufacturer. They have not taken kindly to the idea of having their products and methods criticized. On the whole, it may be said that the manufacturers do not seem to have realized fully the ultimate benefits which they could derive by conscientious adherence to the rules of the Council. Nor have the medical journals come up to their opportunity. With a few notable exceptions, they are still carrying advertisements of remedies whose value is not only doubtful, but which have been exposed as more or less fraudulent. There is no doubt that this is a violation of professional standards. The principle of "let the buyer beware" is coming into disrepute even in the commercial world, and has never been countenanced by the medical profession. Nor is the plea of financial necessity a valid one. A medical journal, as any other enterprise, which owes its existence to dishonest means—and many of the advertisements are palpably dishonest—should go out of existence. This evil has been discussed to the point of weariness; and so have the perfectly obvious means of ending it. That these have not yet been put into effect is my only excuse for again burdening you with the subject. Perhaps after a time the cumulative suggestion may have some result.

The N. N. R. is not an ideal guide to materia medica. On the one hand, it does not describe the older standard remedies, because they are outside its scope; on the other hand, it describes many more new drugs than are really needed. Some of these are so experimental that their general use is scarcely advisable, although the available information about them should be accessible. Many others are little more than duplications. The change of a side-chain makes a new drug; but it may have no more importance than would a change of flavor. The evils of too many remedies are self-evident, and have been so often discussed that I need not enumerate them. I need only repeat that a relatively few well-studied drugs can accomplish much more than a large number of ill-understood modifications. More progress can be expected by simplification than by multiplication. This has been recognized by the establishment of several official "restricted lists," by the Associated State Boards and other bodies. It is not the intention of these lists to restrict the liberty of any physician to employ any drug which he believes valuable; but they serve the useful purpose of concentrating attention on those drugs which general experience has shown to be the most valuable.

PRESENT ACTIVITIES OF THE COUNCIL

There is need of an authoritative compend of these established drugs, giving in handy and convenient form the information which practitioners need in every-day prescribing. To fill this want the Council has prepared a little book on "Useful Remedies." That there may be no misunderstanding, I wish to explain that the present edition is little more than a program, issued for the purpose of eliciting suggestions. The book itself, which will be perhaps double the size of the present volume, will contain about the same drugs, and such physical and chemical characters and incompatibilities as are practically important; but it will give much more attention to their special indications and contra-indications,

methods of administration, dosage, etc. It is not intended to take the place of the Pharmacopeia, for it will contain only the most indispensable pharmaceutical and chemical information; nor is it intended to take the place of pharmacologic text-books, for the actions will be discussed very briefly.

Another committee of the Council has prepared a series of educational articles on serums and vaccines. These subjects are developing so rapidly that the practitioner finds it difficult to keep abreast of the achievement; and as was formerly the case with the synthetic chemicals, he is at a loss to distinguish between established facts, tentative conclusions and discarded theories. The notable victories from this field have, as usual, attracted a crowd of camp-followers who, if unrestrained, would bring the whole subject into discredit. The Council considers it a duty to caution against the hasty acceptance of unusual claims until these have been thoroughly investigated. In particular, "mixed" inoculation must be regarded with suspicion. Starting with the fact that it may be advisable to inject more than one vaccine when more than one organism is found to be concerned in the particular infection, enterprising manufacturers have proceeded to prepare all sorts of "fancy mixtures," aimed to cover equally fanciful mixed infections, without troubling the physician to ascertain whether or not the patient is really infected with these particular organisms. We may perhaps concede that a scattering shot of this kind may sometimes happen to hit the disease harder than it does the patient. The same was probably true of the ancient Theriaca Andromachi Junioris, whose sixty-five ingredients appear childishly simple in comparison with the neopoly-pharmacon of to-day. At least, the Theriaca had the great advantage of doing no harm, if it did not do much good.

I had intended to speak at some length on some of the other activities of the Council; particularly on the work of its Committee on Therapeutic Research. That, however, is so important a subject that it deserves better than to be brought in at the end of an address. I will therefore reserve it for another occasion.

RESULTS

What I have already said will show you the progressive evolution of the Council and will enable you to judge what it has accomplished in the past and what it is likely to accomplish in the future. Naturally this work has not been done without cost. The Association has to carry the financial burden; the members of the Council and the institutions with which they are connected have to sacrifice their time; and since the laboring hours of the day are more or less limited, other work had to be sacrificed also. Has the cost been worth while? Since there is no direct way of evaluating the results of such work, we can only compare conditions as they were before the foundation of the Council with what they are to-day.

I have spent sufficient time on the conditions as they were. How are they now? I may as well confess that they are not what they might be; but they are vastly better than they were. Secret nostrums, worthless remedies, blatant advertisements and extravagant claims have not been suppressed; and while some frauds have sunk into oblivion, others have arisen. It is significant, however, that new nostrums are not appearing at the former rate; secret remedies are viewed with more suspicion; testimonials of worthless drugs are not written with the same liberality by careless, if well-meaning physicians; the tone of the advertisements has become much less extreme, the claims much more conservative. All this means that the profession is more critical, less inclined to believe that the latest advertised fad must be best; less reliant on biased manufacturers as the exclusive source of therapeutic information. The interest in exact therapeutic observation and experiment is much greater. The teaching of these subjects in our medical schools has vastly improved. I do not know how much the work of the Council has contributed to these advances; but the fact that the advances have been much greater here than abroad seems to show that the Council has at least some share. It is interesting to note that Germany, so long the leader in intellectual improvement, has appreciated the lesson, and has organized a commission along similar lines.

ABSTRACT OF DISCUSSION

DR. F. E. STEWART, Philadelphia: Such a paper as this is a valuable contribution to our work. I think that the work that Dr. Simmons has done for the Association cannot be spoken of too highly. There are several things that should be considered more carefully. One is that new drugs ought not to be introduced until submitted to the Council. Manufacturers would be very glad, I am sure, to submit drugs to the Council for thorough investigation as to their pharmacology and therapeutics before placing them on the market. If it could be done, it would save thousands of dollars. I do not think that the manufacturing houses should teach therapeutics at all. It is not the field they should work in. Their work should be confined to their legitimate channel, to manufacture drugs properly and disseminate information by circular without any attempt on their part to create a demand by misleading advertisements or suppressing things that should be known to the profession. I believe that if the Council can secure this cooperation it will be a great advantage to all concerned.

DR. BERNARD FANTUS, Chicago: I should like to add a word of appreciation for "Useful Remedies," the new book which is being issued by the Council. We have been laboring for some time under the great disadvantage of having to teach too many drugs to our students in order to prepare them for state board examinations, as many of you know. Considerable thought has been expended on the proper list of drugs, a knowledge of which might properly be demanded by state boards from candidates. It seems, however, that these lists have not yet been adopted to any great extent, and it is hoped and it seems to me may be hoped very reasonably that his book may fill the need of giving us a syllabus to which we should hold our students as perhaps a minimum requirement and which the state boards might be asked to adopt for the preparation of their examination questions.

MR. W. J. WULLING, Minneapolis: I regret that this address and the discussion could not be heard by all physicians. It is to be taken for granted that all those present are in agreement with the necessity for a restricted materia medica, but not all of those responsible for this wide materia medica are here. The average text-book on materia medica includes too many obsolete drugs. A few well-selected drugs will answer all purposes of therapeutics, and the tendency, which is toward that end, is commendable. There were evidences of this tendency, however, when I was a very young man, and I do not see that sufficient progress has been made. I believe that the cooperation of pharmacists is required to bring about the restricted materia medica. While I thought in the beginning that pharmacists should revise the drug list, the physicians have done it so much better than the pharmacists could have done at the time that I am glad they undertook the work instead of the pharmacists. The pharmacists are giving their full cooperation and sympathy to this kind of work because it affects them almost as deeply as it affects the physician. The physician who has made a thorough diagnosis should not feel that he has finished his work. He is judged by the people at large by his ability to relieve the patient of pain and illness, and unless there is a reliable

materia medica to aid the diagnosis he has not completed his work; this has been recognized by schools of medicine lately. The important medical schools have added subcourses to their curriculum and are making it necessary for physicians to take courses in subjects that will make them better practitioners.

DR. ALEXANDER S. VON MANSFELD, Ashland, Neb.: This paper has furnished an excellent text to be taken home and enlarged on before county societies; this could be done through the whole year without being exhausted. The book entitled "Useful Remedies" is misnamed. It should be called a commentary on good remedies; that would come home at once in our criticism of the man who made the statement in regard to the druggists having thought of doing that thing. Harter fifty years ago in Germany in his "Commentary on the Pharmacopeia Germanicum" did just this. The publication of this little work as outlined by Dr. Sollmann will be a good means of extending to the Pharmacopeia of the United States the things that it might have contained to the advantage of the medical profession. I am a little bit impatient of the shortcomings of the Pharmacopeia of the United States, and yet I am proud to say that I was one of three men who insisted on the standardizing of the Pharmacopeia. When the bill was passed, I was chairman of the Committee on Pure Foods of the American Medical Association. Now let us by all means not forget the main point at issue. We have a commentary; and whatever the little new volume is named it will make up the defects of the Pharmacopeia. I have to take up first one book and then the other, and I am getting tired of this waste of time and am going to charge the time to some one.

DR. RALPH ST. J. PERRY, Farmington, Minn.: In the list of useful remedies I think it would be a good idea if the Council could send a number to every examining board in the United States and insist on their using it. I remember that when I first came into Minnesota, a number of years ago, I was given ten questions, two of which related to "patent medicines." We must all admit that the manufacturing pharmacists are in the business for the money they can make out of it, and from the liberal way in which they advertise and distribute samples I am pretty sure that none of them are going to die in the poorhouse. My experience is that the average manufacturing pharmacist is honest. I remember that a few years ago when I was in the tropics I ran across an excellent substitute for santal. I collected a large quantity (at that time no Council on Pharmacy was in existence), some of which I sent to Josiah K. Lilly, because he was an old schoolmate and I had confidence in him. The Lilly people investigated it and turned it down, saying that it was not so good as some other remedies. If they had wanted to exploit the drug they could easily have done so. Some years ago I found a remedy which I thought good. I submitted it to Parke, Davis & Co. and Nelson Baker. They both told me that it was without value. Since then, however, it has been taken up and universally used throughout the United States by a good many physicians. Another thing which the Council ought to emphasize to the general practitioner is that it is not their aim to restrict the individual liberty of prescribing. Many physicians think that the object of the Council is to prohibit or limit their prescribing. It is not; they can prescribe any remedy that they want to. The Council acts in an advisory, not mandatory, capacity. If the physicians of the country understood this, they would have kindlier feelings toward the Council.

Vital Statistics Essential.—Health officers tell us that public health work without mortality statistics is like ocean navigation without chart or compass—aimless and meandering. Agencies for the prevention of blindness cannot save the eyes of infants if infants come into the world unannounced and unrecorded. Child labor cannot be regulated until birth registration gives us the actual ages of children and compulsory education can only be partially successful until that time. The National Children's Bureau must remain largely inactive until births are recorded.—Birth and Death Bookkeeping, bulletin issued by the Association of Life-Insurance Presidents.

ANAPHYLAXIS IN THE DIAGNOSIS OF CANCER *

J. LOUIS RANSOHOFF, M.D.

CINCINNATI

Two years ago I published a preliminary report[1] on the experimental study of anaphylaxis in cancer. I showed that there is a decided difference in the anaphylactic reaction when guinea-pigs sensitized with blood-serum from a normal individual and other guinea-pigs sensitized with blood-serum from a cancer-bearing individual are both given a final dose of blood-serum from a cancer-bearing individual. Two series of guinea-pigs were used in each experiment. Pigs of Series A were sensitized with normal blood-serum in doses varying from 0.01 to 0.5 c.c. Series B was sensitized with the same amounts of blood-serum from an individual bearing an advanced cancer. After two weeks, when sensitization was established, each pig, of both Series A and Series B, was given an intraperitoneal injection of 5 c.c. of blood-serum from a cancer-bearing individual. The results were decisive. The pigs of Series A, those pigs sensitized with normal blood-serum, had symptoms of anaphylaxis which appeared promptly and were of the usual severity. The pigs of Series B, those pigs sensitized with blood-serum from a cancer-bearing individual, had mild, if any, symptoms. In Series A the symptoms appeared promptly; while in Series B they were, when present, delayed. Evidently the pigs of Series B, those sensitized with cancer blood-serum, had been immunized against the anaphylactic reaction, as they did not react when a final dose of cancer blood-serum was injected.

From these experiments I inferred that there is some specific substance in the blood-serum of cancer-bearing individuals probably absorbed from the cancer itself. Since then I have applied this method of showing the difference in the anaphylactic reaction of normal and cancer blood-serum to the diagnosis of cancer. As a sensitizing dose of 0.1 c.c. gave the best results in the preliminary experiments, I am now using it in all the work.

Pigs weighing from 200 to 400 gm. are most susceptible and are used in all tests. The pigs of each group are divided into two series, A and B. Each pig of Series A is sensitized with 0.1 c.c. of blood-serum from a normal individual; each pig of Series B, with a like amount of blood-serum from an individual bearing an advanced cancer of any type, the diagnosis confirmed by microscopic examination. After ten days the pigs are ready for the diagnostic test. From 3 to 5 c.c. of blood-serum from the suspected case are injected intraperitoneally into Pigs A and B, the dose being graded according to the weight of the pigs. When the blood-serum is from a normal individual, both Pigs A and B have the ordinary prompt severe symptoms of anaphylaxis. In case the blood-serum is from a cancer-bearing individual, Pig A shows the ordinary severe symptoms, Pig B shows mild symptoms, if any. Even when mild symptoms are present, they are delayed.

For example: Pig A shows distinct symptoms in from one to two minutes, while the symptoms of Pig B may be delayed from five to ten minutes or even longer. So marked is the difference in the symptoms of the two

---

* Read in the Section on Surgery of the American Medical Association, at the Sixty-Fourth Annual Session, held at Minneapolis, June, 1913.

*From Cincinnati Hospital Laboratory.

1. Ransohoff, J. L.: Experimental Study of Anaphylaxi in Carcinoma, THE JOURNAL A. M. A., July 8, 1911, p. 103.

pigs that an untrained observer may interpret the reaction. In fact, all the tests have been interpreted by workers in the laboratory. Sensitized guinea-pigs are kept in readiness for tests when the occasion arises. The pigs remain sensitized for an indefinite period. In some cases correct tests have been made ten weeks after sensitization.

At the risk of repetition I must again state that the tests have been interpreted by fellow workers in the laboratory, students and laboratory attaches. In all I have fifty cases to report. Thirty of these were cancer (Table 1) and twenty were non-malignant (Table 2). The tests were never positive unless cancer was present. The anaphylactic diagnosis of cancer was not made unless proved by subsequent operation, post-mortem, microscopic examination or, in a very few cases, by the course of the disease; namely, the death of the patient with all the clinical symptoms of cancer. In four cases of cancer the test was negative. Strange to say and difficult to explain, these were, with one exception, advanced cases: (1) advanced case of cancer of the stomach; (2) advanced case of cancer of the gall-bladder; (3) advanced case of cancer of floor of the mouth; (4) very early cancer of the stomach without tumor formation.

In all the cases examined the margin of error was 8 per cent. Therefore, the correct diagnosis was made in 92 per cent. Taking the cancer cases alone, the error is somewhat larger, 13.3 per cent. incorrect, or 86.7 per cent. correct, diagnosis. The tests made in all classes of cases according to the material available were as follows: uterus, 4; breast, 10; tongue and floor of mouth, 5; stomach and intestines, 6; thyroid, 1; lymph-nodes, 1; gall-bladder, 2; prostate, 1.

Dividing the cases into incipient, operable, and inoperable, there were six incipient, twelve operable and twelve inoperable. By incipient I mean cases with

TABLE 1.—CANCER CASES

No.	Clinical Diagnosis Cancer.	Anaphylactic Diagnosis	Confirmation.	Remarks
1	Uterus	Cancer	Microscopic	Inoperable.
2	Uterus	Cancer	Microscopic	Inoperable, test positive with cancer suspension.
3	Breast	Cancer	Microscopic	Advanced.
4	Tongue	Cancer	Microscopic	Operable.
5	Stomach	Cancer	Operation	Advanced.
6	Thyroid	Cancer	Course	
7	Uterus	Cancer	Microscopic	Late.
8	Stomach	Cancer	Operation	Patient died 6 months after operation.
9	Breast	Cancer	Microscopic	Incipient.
10	Lymph-nodes	Cancer	Microscopic	Test also positive with cancer suspension.
11	Breast	Cancer	Microscopic	Incipient.
12	Breast	Cancer	Microscopic	Operable.
13	Gall-bladder	Cancer	Operation	Cancer of gall-bladder spreading to liver.
14	Face	Non-malignant	Microscopic	
15	Palate	Cancer	Microscopic	
16	Breast	Cancer	Microscopic	Inoperable.
17	Breast	Cancer	Microscopic	Inoperable.
18	Tongue	Cancer	Microscopic	Incipient.
19	Sigmoid	Cancer	X-ray and course	Patient died 6 months after examination.
20	Breast	Cancer	Microscopic	Operable.
21	Uterus	Cancer	Microscopic	Advanced.
22	Stomach	Non-malignant	Microscopic	Incipient.
23	Breast	Cancer	Microscopic	Incipient.
24	Breast	Cancer	Microscopic	Incipient.
25	Stomach	Non-malignant	Microscopic	Late.
26	Intestine	Cancer	Operation	
27	Mouth	Cancer	Microscopic	
28	Breast	Cancer	Microscopic	Test also positive with cancer suspension.
29	Prostate.	Cancer	Course	
30	Gall-bladder	Non-malignant	Microscopic	

Number of cancer cases..... 30
Failures 4
Correct diagnosis 86.7%

TABLE 2.—NON-CANCER CASES

No.	Clinical Diagnosis	Anaphylactic Diagnosis.	Confirmation.	Remarks
1	Tuberculous lungs	Non-cancer	Tbc. bacilli in sputum	
2	Myocarditis	Non-cancer		
3	Normal			
4	Tuberculous peritoneum.	Non-cancer	Operation	Still living 2 years after operation.
5	Enlarged liver	Non-cancer		All evidences of cirrhosis.
6	Gall-stones	Non-cancer	Operation	Gall-stones obstructing portal vein simulating cancer.
7	Cirrhosis of liver	Non-cancer		
8	Secondary anemia	Non-cancer		Cured by medical treatment.
9	Sarcoma of neck	Non-cancer	Microscopic	Enormous lymphosarcoma.
10	Leukoplakia of tongue	Non-cancer	Microscopic	Patch removed; no recurrence after 1 year.
11	Syphilis of mouth	Non-cancer	Wassermann positive	Cleared up under salvarsan.
12	Syphilis of palate	Non-cancer	Wassermann positive	
13	Catarrhal jaundice	Non-cancer		Cleared up under medical treatment.
14	Cirrhosis of liver	Non-cancer		
15	Chronic intestinal stasis.	Non-cancer		Cleared up under medical treatment.
16	Tuberculous cervical adenitis.	Non-cancer		
17	Acute intestinal obstruction.	Non-cancer	Operation	Obstructed by band.
18	Papilloma of bladder.	Non-cancer	Microscopic	
19	Normal	Normal		
20	Normal	Normal		

Number of non-cancer cases..... 20
Correct diagnosis 100%
Total number of all cases 50
Correct diagnosis 92%

small tumor formation and without involvement of the lymph-nodes.

In three cases a very interesting experiment was made. The tests were made in the ordinary way with blood-serum and found positive. The cancerous tissue from these cases, procured at operation, was ground in a mortar with powdered glass, emulsified with a small amount of salt solution and placed in an incubator for an hour. The suspension was then centrifuged and the supernatant fluid injected into guinea-pigs sensitized in the usual way. In all three cases the typical positive cancer reaction was obtained. Although no final conclusion can be drawn from these experiments, they certainly seem to indicate that the substance in the blood-serum in reality originate from the cancer tissue itself.

The twenty negative cases may be divided into the following classes: tuberculosis, 3; normal, 3; syphilis, 3; hypertrophic cirrhosis of liver, 1; myocarditis, 1; sarcoma, 1; gall-stones, 1; cirrhosis of the liver, 2; anemia, 1; jaundice, 1; acute intestinal obstruction, 1; intestinal stasis, 1; papilloma of the bladder, 1.

The most interesting classes of cases are the tuberculous, syphilitic and sarcomatous. There were three cases of tuberculosis; one of the peritoneum with tumor formation, one of the lung with enlarged bronchial glands, and one chronic suppurative cervical adenitis. The syphilitic cases were all of the tertiary type one syphilitic leukoplakia of the tongue, one syphilitic inflammation of the mouth and nose, one ulcer of the soft palate. The latter two cases gave positive Wassermann tests and yielded to salvarsan. The leukoplakia of the tongue gave a negative Wassermann. The leukoplakic patches were removed and microscopically showed the typical evidences of chronic inflammation.

CONCLUSIONS

1. From these tests it seems possible that the anaphylactic test may prove an aid in the early diagnosis of cancer. The five early cases, which gave positive tests, seem particularly significant.

2. The margin of error (8 per cent.) is not large enough to invalidate the test.

3. The most valuable single factor is the uniformity of negative tests in non-malignant cases. There seems no possibility of making a diagnosis of cancer, when cancer is not present.

4. A positive diagnosis seems absolute evidence of the presence of cancer.

5. This test needs further trial by other workers.

19 West Seventh Street.

ABSTRACT OF DISCUSSION

DR. OSCAR BERGHAUSEN, Cincinnati: In the ordinary case of cancer in which the tissue is accessible, the microscopic examination is sufficient, but when that is not the case some other means of diagnosis must be sought, such as the method described by Dr. Ransohoff. This method gives some promise of being a valuable means of diagnosis. The fact that 87.7 per cent. of accurate diagnoses were made in cancer cases is indeed most encouraging. It is very seldom that any method of diagnosis by clinical or specific means reaches that high rate. The change following the injection is very marked, as in a case at which I had the pleasure of being present. The experiments were all made at the laboratory of the Cincinnati Hospital, and several men made the observations to confirm those of Dr. Ransohoff. The test differs from previous tests along anaphylactic lines in that normal serum, as well as cancer serum, was used.

SURGERY OF THE THYROID

OBSERVATIONS ON FIVE THOUSAND OPERATIONS *

CHARLES H. MAYO, M.D.

ROCHESTER, MINN.

During the twenty-five years ending May 14, 1913, 5,000 operations were performed on the thyroid in the clinic at St. Mary's Hospital. These operations were done on various types of goiters and may be classified as follows:

Simple goiters	2,396
Including	
Transplantations in cretins	11
Operations for malignancy: carcinoma, 52; sarcoma, 7	59
Operations on syphilitic thyroids	1
Exophthalmic goiters, including double and single ligation, extirpation, partial thyroidectomy	2,295
Early operations not clasified, majority simple goiter	309
Total	5,000

An increase in the size of the thyroid may be physiologic or pathologic. In the higher invertebrates the gland has a marked sexual relationship, and through this association we have a suggestion that the thyroid may be a factor in the manifest disturbances which occur at certain periods, especially in the female, as the well-known goiter of adolescence, the congestion of the thyroid during menstruation and its not infrequent enlargement during pregnancy.

While as yet we have no knowledge of a specific causative factor in the production of goiter, nevertheless a great deal has been learned during the past quarter of a century concerning the physiology and pathology of the gland. Among its several functions the thyroid has been shown to be a *defense gland* and that it has much to do with physical and mental development. It is evident that increased activity of the gland is required during infections in different organs of the body. Several observers, among them McCarrison, believe this demand to be occasioned by intestinal toxemia, and that this may play an important part is undoubtedly true. The work of various goiter commissions and the reports of those observers who have made a study of the etiology of goiter make it quite apparent that, whatever the agent, it seems to be more readily conveyed by water than by any other medium, although water is probably not the sole carrier. The so-called goitrogenous water, when boiled, is not infective. Evidence varies as regards intestinal toxemia. Boiled water contaminated with the feces of an individual having recently developed goiter has produced goiter in goats, while the filtered residue of goitrogenous water from districts in which goiters prevail has also produced the same result in man and the goat. This does not necessarily prove a specific agent; it may indicate a demand on the system for increased resistance and greater elimination of toxic material. Repeated tonsillitis is another disease in which an infection may have a bearing on the hyperactivity of the thyroid.

The thymus gland and the thyroid are undoubtedly intimately associated in the growth and development of early life. We now know that the thymus is much more regularly persistent throughout life than it was formerly supposed to be and that not infrequently the gland may be of great size in advanced middle age, compressing the trachea at or just above its bifurcation. Such a complication is more common and more grave in late goiters of the serious hyperplastic type.

* Read in the Section on Surgery of the American Medical Association, at the Sixty-Fourth Annual Session, held at Minneapolis, June, 1913.

The occasional large goiter observed in the cretin has but little active parenchyma. If these goiters cause distress they should be removed. We have repeatedly transplanted gland from the mother, and also from fresh simple and exophthalmic goiter. In none of these cases did the transplanted gland functionate, though for a short time it furnished secretion by absorption.

Changes in the voice are often caused by the presence of goiter. Large right-sided goiters quite frequently produce paresis of the left recurrent laryngeal nerve. It is therefore advisable to make a laryngoscopic examination before doing a thyroidectomy, which otherwise may be blamed for the paresis discovered later. Loss of voice through injury of the recurrent laryngeal nerve during operation is not a rare occurrence. Possibly 10 per cent. of patients have some temporary hoarseness, and about 5 per cent. a permanent difficulty with one cord, but without loss of voice. This percentage is small compared with the number of cases of paresis or paralysis due to the pressure of a goiter.

The left recurrent nerve, which is more frequently affected, lies slightly deeper than the right and has received more stretching during embryonic life. This may account in some measure for its greater susceptibility to injury from pressure. Extensive exposure of the nerve, as is done in some clinics, is necessary only in an operator's early experience, or in operating on nodular thyroids which extend beneath the trachea and which may have displaced the nerve. The scar tissue resulting from the traumatism of a too free exposure of a nerve may lead to secondary paresis.

Intrathoracic goiters and deep substernal goiters are of serious import and are found about once in fifty operations for simple goiter. Slight substernal projections are much more frequent. The diagnosis rests on (1) dull area on percussion, (2) the roentgenograph, and (3) evidences of substernal pressure (dilated veins, obstructive dyspnea and palpation of the upper pole of the gland just above the clavicle).

A special histology of the parathyroid glands was described by Sandstrom in 1880, and they have been the subject of much investigation and experimentation from a surgical point of view during the past few years.

While a great deal has been attributed erroneously to the parathyroids, they are worthy of serious consideration by the surgeon operating on the thyroid. There are four parathyroids in the human being normally and, since the veins of these bodies have no valves, they are quite liable to imperfect development through congestive conditions occurring during birth. Inasmuch as but one or two of them may be active and their injury during operation may cause tetany, their location must be avoided by preserving the posterior capsule, especially when both sides of the thyroid are operated on. Because of the difficulty in identifying the parathyroids, it is best also to preserve all small gland-like bodies beneath or connected with the posterior capsule. Treatment, however, of operative tetany with calcium lactate and also beeves' parathyroid with thyroid extract has been very effectual. Our experience with this disease and treatment is limited to one mild case of temporary duration.

As regards the non-surgical treatment of goiter, there is no question but that many cases of simple goiter, especially of the adolescent type, undergo a natural resolution, which is also true of congestions and enlargements occasionally observed during pregnancy. In the hyperemic goiters of adolescence some form of iodin treatment may have a favorable effect. In encapsulated adenomas the use of iodin may manifest a temporary favorable effect on the surrounding gland, but the effect on the encapsulated tissue is uncertain. Its use between the ages of 35 and 60 seems to stimulate the activity of the thyroid and to cause degenerative changes. More recent experience in the non-surgical treatment seems to indicate the use of thymol, salol and iodin as intestinal antiseptics. The administration of thyroid gland has rather an uncertain effect, yet apparently produces favorable results in the early treatment of simple goiters. In a considerable percentage of cases, hyperthyroidism unquestionably is checked at various stages of the disease by natural or therapeutic measures. In exophthalmic goiters temporary improvement has been obtained by the use of the Roentgen ray, which seems also to be of value in carrying serious cases through exacerbations. The cytolytic serums for specific action on the thyroid have not borne out in their results the early expectations of the medical profession.

In operating on the thyroid, the best exposure to be obtained is through a transverse incision low in the neck, the skin and platysma turned together each way from the incision. Should further exposure be necessary, the sternohyoid may be sectioned high in the exposed area to prevent movement of the cutaneous scar and preserve a working muscle. In simple goiters it is best to extirpate a greatly enlarged lobe. If both lobes are symmetrically enlarged, division of the isthmus with double resection of the gland is indicated for the best cosmetic results. Midline encapsulated adenomas should be enucleated with division of the isthmus. Lateral encapsulated adenomas may be enucleated or the whole lobe extirpated.

If symptoms of hyperthyroidism are present, extirpation is indicated. In severe cases of hyperthyroidism, in acute attacks and relapses or exacerbations, the condition should be considered medical until improvement takes place. If no improvement proves manifest under such care, injections of boiling water into the lobes (Porter) may give relief.

During the first three or four months of the symptoms extirpation can safely be made since the heart then is not dilated. If dilated to exceed 1 inch, primary ligation of the superior thyroid vessels is indicated, followed in four months by extirpation. After the first year a much smaller percentage of cases requires primary ligation. A single test ligation on one side may be made in doubtful cases, to be followed in a week by a second ligation or partial extirpation according to the degree of reaction.

The records of a large number of patients in this series show an average gain of 22 pounds within four months after ligation. These patients were then operated on, a partial thyroidectomy being done with safety. Following these methods of safety, we have performed 278 operations on cases of hyperthyroidism between deaths. Long-standing cases of simple goiter and adenoma may, by degeneration or chronic slow thyrotoxicosis, cause serious disturbances in the heart, kidneys and blood-vessels. Especially is this true of patients in middle and advanced middle life. When such complications are present operations are made with considerable risk.

Excluding malignancy, the mortality in operating on goiters is very low. It varies but little at present in the cases of so-called simple goiter, in which class are included occasional complications, from the cases of so-called exophthalmic goiter with hyperplastic glands. In the early development of surgery, operations on exophthalmic goiters were delayed until serious complications arose with the heart, kidneys or nervous system. This led to a high mortality, which naturally deterred physicians from sending patients to surgeons for early

operation. The greater the delay the greater the mortality—hence a surgical vicious circle. Our mortality in the first sixteen cases (which were, of course, advanced) was 25 per cent.—about the average percentage in other clinics at that time. The mortality at present varies from 1 to 3 per cent. This great reduction in mortality is probably due less to operative skill and technic than to better judgment as to the time and extent of the operative procedure instituted, as well as to the skilled use and rational choice of an anesthetic. The various causes of mortality are hyperthyroidism, embolism, pneumonia, hemorrhage, sepsis, etc.

The results of operating on simple goiters are well known to be exceedingly satisfactory. Severe myxedema is but a rare complication following such operations, especially if the area of the gland nearest the capsule be preserved. The large colloid masses in the interior of these glands represent the great bulk of the tumor but the least amount of the working area of thyroid tissue.

Operation in cases of hyperthyroidism appears to give about 75 per cent. of cures, while the remaining 25 per cent. are more or less benefited, according to the degree of complication and the stage of the disease. Probably 10 per cent. have some degree of relapse in from one to three years after operation, usually manifested by the return of symptoms. In these rare cases further operation by ligating the vessels, and in most cases by removal of a portion of the remaining lobe, improves the condition of the patient by reducing the amount of thyroid secretion. Exophthalmos of marked degree and long standing may still be present when other symptoms are cured. This is due to the gradual contraction of the non-striated muscle which sustains the globe to the anterior supporting orbital fascia (Landstrom). In some cases we have greatly improved this condition by removing the superior and middle sympathetic ganglions.

If the patient is in a good general condition without complicating conditions, a general anesthetic, for instance, ether by the drop method, is preferred. Ordinarily patients receive 1/6 grain of morphin and 1/150 grain of atropin half an hour before the operation. Nervous patients having exophthalmic goiter may receive 1/200 grain of scopolamin one hour before operation, but without the atropin unless a general anesthetic is also to be given. Scopolamin is uncertain in its effects, some patients being made worse by its use. Patients suffering from grave complications rendering general anesthesia inadvisable can be carried through extensive operations by free local injections of novocain, 0.5 per cent.; and a combined local and general anesthesia, as advocated by Crile, may be of advantage in many cases. Intratracheal anesthesia is indicated in those cases of scabbard or distorted trachea in which the patient is already suffering from dyspnea, or more especially in those suffering from malignant disease of the thyroid, and complications due to enlarged thymus.

ABSTRACT OF DISCUSSION

Dr. George W. Crile, Cleveland: I can confirm Dr. Mayo's conclusions by my own experience, having operated in over 800 cases of goiter of all types and varieties. I have never seen a single case in which cancer of the thyroid diagnosticated before operation was cured by operation. I have seen a few cases in which cancer of the thyroid, not suspected before operation, but found by the pathologist, was cured. The safety of the operation for colloid goiter is so great at the present time that, if the patient demands operation, one is justified in removing the gland for cosmetic reasons. The care Dr. Mayo suggested in the preservation of the voice is excellent. I have found that one may take out the entire lobe, carrying the dissection right to the edge of the capsule, using very small hemostats, keeping a bloodless field so that one can see from the beginning to the end of the operation the lymph-vessels as they run out of the gland. In this way it would be impossible to remove either a parathyroid or to injure the recurrent laryngeal nerve. Passing to another subject, I wish that a commission might be appointed for the purpose of investigating the adolescent period of children living in goitrous districts. I believe that the syrup of ferrous iodid in 5-minim doses, three times daily, for periods of a month during every year, will control nearly all cases of simple hypertrophy. One of the factors in the production of adolescent goiter lies in the geologic change in the constituents of the earth where iron is not found in the food as once it was. I find that clinically one can make a very accurate prediction of the pathologic condition to be found in the gland. There is no more doubt in my mind as to the benefits of operation for exophthalmic goiter than of opening an abscess. Patients confirm that view, and our clinics have grown not through reference by physicians but through reference by patients. Nowadays, I believe that there is a general feeling not only among surgeons but also among patients that exophthalmic goiter is a disease that should not be allowed to go on until the stage of degeneration is reached. I believe that the late results of the disease are largely under control. One can operate now and control the hyperthyroidism by the principle of anoci-association, and not have a single change for the worse at the end of the operation, no matter how severe the case, how large the gland or how rapid the pulse-beat.

Dr. A. J. Ochsner, Chicago: The enlargement of the thyroid is primarily a physiologic condition. There seems to exist a certain balance between the amount of thyroid secretion and the amount of secretion that is needed by the human organism for the purpose of carrying on its physiologic work. The thyroid seems to work ahead and, when there is an unusual strain on the physiologic activity of the body, the thyroid seems to prepare for it. This occurs especially when there is to be produced a large amount of new tissue of a highly organized character, or of the bony framework, as for instance during pregnancy. There may be a physiologic increase in size of the thyroid or an increase in weight. The same may be true during the period of puberty. There is an increase in the size of the pelvic bones, and other changes in the anatomy of the girl are followed by an increase of the thyroid. We have another interesting example brought out by Professor Wilms, who found that the students coming to the university from hyperthyroid countries developed hyperthyroidism a short time after their arrival at the university. It seemed as if the thyroid had to produce an additional amount of secretion so as to make it possible for the person to get his growth under the handicap placed on him by the presence of certain substances in the water which he drank. When the young man goes to the university where the water does not contain these, where the thyroid must supply the substances and overcome this handicap, he develops hyperthyroidism. As soon as the boy goes home and drinks the water there, the hyperthyroidism promptly disappears. Some of the water from a town where 70 per cent. of all the inhabitants had goiter was given to rats. Every normal rat which drank this water for a period of weeks developed goiter. This water was boiled and given to other rats and did not produce enlargement of the thyroid. Something in the water had been changed. One of Wilm's assistants, who came from this town, gave water from across the valley to children there; these children did not have large thyroids. The children born on a certain farm did not have enlargement of the thyroid, but those who were born later into the same family, on a new farm, all had enlargement of the thyroid. The water was boiled and there was no more enlargement of the gland. Instead of giving iron or iodids, I would boil the water.

We must not lose sight of the physiologic side of this question. When the calamity has occurred, we must relieve

the condition surgically before it has been destructive in its action, because, as Lundstrom demonstrated in the examination of all his cases, once the destruction has occurred, it is permanent.

DR. CHARLES H. MAYO, Rochester, Minn.: Dr. Crile called attention to a very valuable point, namely, that we have enough cases of goiter now all over the country to warrant the appointment of a goiter commission. In carrying on that work we ought to have the active cooperation of surgeons, internists, physiologic chemists and serologists, to see whether this question cannot be threshed out by having such a group of men at work on it, each one working on a series of cases, so that we could get something before this Section to guide us in our further work. Switzerland has had two or three such commissions, and the Indian government also has such a commission, which has already done an enormous amount of work. There is no doubt that goiter is toxic, but toxic as alcohol is toxic to the blood-vessels and to the heart. When a patient (usually a woman) has suffered for twenty or thirty years from colloid goiter, she begins to think about the goiter. She consults a physician and he starts to treat her with iodin, and in six weeks or three months she thinks that the goiter is smaller, but the doctor will change his indication for treatment from goiter to myocarditis or endocarditis. That can be done by treatment in overstimulating the gland which for twenty or more years could not give the necessary secretion. Nature has fortunately endowed us with enough glands so that we can spare a few. Take out one kidney or even half of the remaining kidney and still half a kidney will do the work. We can get along with one tenth of a pancreas, but that does not mean that we have too much kidney substance or too much pancreas substance. It simply means that Nature can accommodate herself to a certain extent so that a part of a gland can do the work of a whole gland. Take the high-school girl who is overworked, whose general condition is bad from overexcitement. She is very nervous; she receives a sudden shock. She has been struggling with an oversecretion of the gland, trying to neutralize certain poisons, and following the shock she develops in a few weeks a severe grade of exophthalmic goiter. Due to what? To overthrow or upsetting of the balance which had existed and which prevented any untoward effect on the sympathetic nervous system. It did not come on suddenly. It suddenly became acute. That is all. It had been there for a long time. It made her nervous and the shock made it acute.

LANGE'S COLLOIDAL GOLD CHLORID TEST ON THE CEREBROSPINAL FLUID IN CONGENITAL SYPHILIS *

C. G. GRULEE, M.D.
AND
A. M. MOODY, M.D.
CHICAGO

Anyone who has had much experience with the Wassermann reaction and other laboratory tests as applied to the diagnosis of congenital syphilis must feel that such reactions are entirely inadequate, and this especially applies to those cases in which they are most needed, that is, in very young infants.

Zsigmondy[1] has shown that certain albuminous bodies when brought in contact with a solution of colloidal gold in the presence of an electrolyte, would, in certain concentrations, cause a clumping together of the small colloidal particles producing various changes in color and even precipitation. He also found that when these albuminous substances were in less dilute solutions they possessed a protecting power which prevented precipitation. Furthermore, it was noted that the point at which protection ceased and precipitation began was different for each albumin. Lange, therefore, concluded to try the effect of spinal fluids on colloidal gold solutions.

Very shortly Lange found that when he used a certain amount of cerebrospinal fluid from a patient with general paresis, in the presence of 0.4 per cent. sodium chlorid and added the colloidal gold solution he got a certain change of color. He tried this again with spinal fluid from a similar case and got the same kind of a reaction. These tests were repeated always with the same result.

Tabetic spinal fluid was then tried with a resulting reaction approaching somewhat that of general paresis cases. Continuing in this way he found that all cerebrospinal syphilis cases reacted in about the same dilutions; and that those cases not due to syphilis either gave no reaction at all or reacted at different dilutions. He was thus, by the gold test alone, able to differentiate the luetic cases from those due to other diseases.

As Lange's experiments and studies continued he found that general paresis had an absolutely typical reaction; that, knowing nothing about the history of the case, one could say, from the gold test alone, whether or not the fluid in question was from a case of general paresis. The reaction for tabes, although quite characteristic, is not pathognomonic. One can, however, say that it is undoubtedly syphilis. Syphilitic meningitis gives a definite reaction for syphilis. On the other hand, Lange found that tuberculous meningitis, suppurating meningitis and other forms of meningeal inflammations, whenever the spinal fluid gave a positive Nonne (ammonium sulphate test), would give a positive gold reaction, lower down the scale of dilutions.

It can now be seen that Lange found something in the gold test which was much finer than anything in the tests heretofore in use. The Nonne simply told him that he had a pathologic fluid. With the gold test he could in some cases diagnose, and in all cases he could say with a high degree of certainty whether or not the case was one of syphilis.

Lange himself is extremely conservative and, in order to make a definite diagnosis, he still advises the use of the clinical history, the Wassermann, cell-count, and the Nonne in addition to the colloidal gold-precipitation test.

Materials Needed for the Test.—

1 per cent. solution of gold chlorid (Merck's Yellow Crystals).
2 per cent. solution of potassium carbonate.
1 per cent. dilution of liquor formaldehydi.
10 per cent. solution of sodium chlorid.
Jena glass beaker, 1,000 to 1,500 c.c.

It is of the greatest importance that one have a good indicator with which to work in order to get accurate results with Lange's gold test. In order to make up such an indicator the following technic should be followed out in the minutest detail:

1. All glassware used must first be cleaned with acid, then washed in distilled water and dried with heat. Pipets may be dried out with alcohol and ether.

2. To make 500 c.c. of indicator (*a*) take 500 c.c. of freshly double distilled water in a Jena glass beaker (1,000 to 1,500 c.c.), and heat slowly over wire gauze; (*b*) when the water is approximately 60 C., add, while still heating, 5 c.c. of 1 per cent. solution of gold chlorid and then follow *immediately* with 5 c.c. of 2 per cent. solution of potassium carbonate; (*c*) heat rapidly to boiling; (*d*) turn out flame as soon as first steam bub-

* From the Laboratory of the Presbyterian Hospital, Chicago.
1. Zsigmondy: Ztschr. f. Chemotherapie, 1912, 1, 44.

TABLE 1.—CASES CLINICALLY CONGENITAL SYPHILIS*

Name	Age	Gold Chlorid Reaction 1/10	1/20	1/40	1/80	1/160	1/320	1/640	1/1280	1/2560	1/5120	Nonne	Wassermann-Noguchi
Helen W.	6 weeks	+++	+++	+++	+++	+++	±	0	0	0	0	+	—
Anna K.	6 weeks	++	+++	++	++	±	0	0	0	0	0	±	—
Anna K.	13 weeks	0	0	0	0	0	0	0	0	0	0	+	—
Baby M.	4½ months	++	+++	++	++	±	0	0	0	0	0	+	—
Harold G.	3 weeks	++	++	++	++	±	0	0	0	0	0	+	—
Armando M.	1 year	++	+++	+++	+++	+	0	0	0	0	0	+	—
Baby C.	6 months	+++	++++	+++++	++++	++	+	0	0	0	0	+	—
Ruth S.	6½ months	+—	++	+++	++++	+	0	0	0	0	0	+	—
Ger. R.	10 months	+	++	++—	+++—	+	±	0	0	0	0	+	—
Baby E.	4 years	++	+++	+++++	++++	+	0	0	0	0	0	+	—

*The single plus mark (+) indicates red and red-blue; ++, red-blue and blue-red; +++, violet and dark blue; ++++, light blue; +++++, clear.

TABLE 2.—CASES OF SUSPECTED CONGENITAL SYPHILIS

Name	Age	Diagnosis	Gold Chlorid Reaction 1/10	1/20	1/40	1/80	1/60	1/320	1/640	1/1280	1/2560	1/5120	Nonne	Wassermann-Noguchi
Gladys	2¾ years	Susp. Cong. Syph. Pyelocystitis, Anemia.	++	++	+++	++	+	0	0	0	0	0	±	—
Forrest S.	9 mos.	Susp. Cong. Syph. Anemia.	±	±	+	±	0	0	0	0	0	0	±	—
Irene N.	3 mos.	Susp. Cong. Syph.	+	++	+++	+++	+	0	0	0	0	0	+	+
Wyd. St.	2 yrs.	Susp. Cong. Syph.	++	+++	+++++	++++	+	0	0	0	0	0	+	+
Helen C.	6 weeks	Susp. Cong. Syph.	+	++	+++++—	+++++	+++++—	+	0	0	0	0	±	—
Mart B.	3 yrs.*	Susp. Cong. Syph.	+++	+++++	+++++	+++++	++	±	0	0	0	0	+	+
Eva K.	7 mos.	Susp. Cong. Syph.	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	—

*Valvular heart disease.

TABLE 3.—NON-SYPHILITIC CASES

Name	Age	Diagnosis	1/10	1/20	1/40	1/80	1/160	1/320	1/640	1/1280	1/2560	1/5120	Nonne
Wyman E.	5 years	Anterior poliomyelitis	+	+	+	++	++	+++	++++	+++—	+	0	++++
Angelo S.	3 months	Coryza	0	0	0	0	0	0	0	0	0	0	0
Sarah R.	3 months	Septic meningitis	+	+	+	+	+++	++++	++++	+++	+	0	+++
Harold B.	3 years	Tubercular meningitis	++	++	+++	+++++	+++++	+++	±	0	0	0	++
Edwin B.	21 months	Pneumo meningismus	+	++	++++	+++	++	0	0	0	0	0	±
Dale H.	7 years	Pneumo meningismus	±	+	++	+	0	0	0	0	0	0	±
Blanche G.	3 years	Tubercular meningitis	+++	+++	+++	+++++	+++++	+++++	+—	0	0	0	++
Rosa R.	18 months	Pneumo otitis media	0	0	0	0	0	0	0	0	0	0	0

bles appear, and (*e*) add *quickly* 5 c.c. of 1 per cent. dilution of liquor formaldehydi; and immediately begin vigorously shaking the beaker until a change in color occurs, which takes from one half to three minutes.

The change that should occur is first a gradual darkening of the fluid with the appearance of a bluish tint, then a dark blue changing to a purple and finally a red. The final solution, if good, should be a red with just a tinge of yellow, and a very faint shade of purple. This is an absolutely clear solution, and, if kept in a clean glass container, will keep almost indefinitely. Occasionally a deposit will be noticed on the sides of the beaker. It must further be noted that one cannot always get an absolutely clear solution. Solutions that are only slightly turbid by reflected light may be used but not for fine tests. Fluids that are purplish and murky should not be used.

The water must be distilled over glass or silver, otherwise one will be unable to make up a good indicator. Ordinary corks, *not rubber,* may be used in connecting up the distilling apparatus.

Having made up the indicator, the colloidal gold solution—and this is the delicate part of the test—place in a test-tube rack a series of ten test-tubes. In the first tube place with a pipet 1.8 c.c. and in each of the succeeding nine tubes 1 c.c. of 0.4 per cent. sodium chlorid made up fresh from a stock 10 per cent. solution. To the first tube now add 0.2 c.c. of spinal fluid free from blood and alkali. This makes a dilution of 1:10. Having mixed this thoroughly with a 1 c.c. pipet, remove 1 c.c. and deposit it in the second tube, thus making a dilution of 1 to 20. Repeat this throughout the series of ten tubes. Throw away the last cubic centimeter. The dilutions then are 1:10, 1:20, 1:40, 1:80, etc. up to 1:5000. Having made the dilutions, then add to each tube 5 c.c. of the indicator and let the tubes stand for twenty-four hours before reading the results.

For this series of cases the technic of lumbar puncture is as follows: The needles are boiled in water, then cleansed in alcohol and finally with ether. The skin of the infant is cleansed with tincture of iodin and then with alcohol. All fluids are rejected which contain blood.

The accompanying tables contain reports on 9 cases which were clinically congenital syphilis (Table 1), many of which responded to specific treatment, though some of the patients died. Careful attention to these tables will show that the most marked reactions occurred in dilutions of 1:40 and 1:80; that in certain instances the reactions extended into the weaker dilutions, but this was not characteristic, and in every instance the most marked reaction occurred in the dilutions given above.

In the cases of suspected congenital syphilis (Table 2), with two exceptions, the reaction was the same. These two exceptions consisted, first, of a case of cross-bun head (a head showing cross furrow in the interparietal and lambdoid sutures), with severe anemia which showed a very slight reaction and that in dilution of 1:40. The other was a case of strongly suspected congenital syphilis which occurred in a child 7 months old. This child died two days after the removal of the cerebrospinal fluid from which this test was made. This fluid gave the reaction which is regarded as typical for general paresis. In all the tubes at all the dilutions we tried, that is, from 1:10 up to 1:5000, there was a marked precipitation of the colloidal gold.

Interesting to note in the first series of cases is that of Anna K. who at six weeks, when a positive congenital syphilis was present clinically, gave the distinct gold chlorid reaction; at thirteen weeks, after continuous treatment, the cerebrospinal fluid was negative throughout.

Of the non-syphilitic cases here reported (Table 3), two gave no reaction. One was in a child 3 months of age with a very severe coryza; and the other in a child who had pneumonia and otitis media together with a streptococcus sore throat. Two very interesting cases are those of Edwin B., aged 21 months, and Dale H., aged 7 years, each of whom had a meningismus complicating a pneumonia. In one of these cases, Edwin B., reaction in the cerebrospinal fluid very closely approached that of congenital syphilis, while in the other the reaction, though very slight, had its greatest intensity at dilutions of 1:40. The two cases of tuberculous meningitis could not be mistaken because the greatest intensity of their reaction occurred in dilutions of 1:80, 1:160, and 1:320.

The case of anterior poliomyelitis and that of septic meningitis (influenzal (?)) show the most marked reaction in higher dilutions.

Many of these cases of congenital syphilis were confirmed by the Wassermann reaction on the cerebrospinal fluid, but in most cases it was impossible to obtain large enough amounts of the cerebrospinal fluid so that a negative Wassermann could be regarded as of no value in excluding syphilis.

While from such a small series of cases one cannot show that the gold chlorid test gives specific reactions in cases of congenital syphilis, one would seem justified in making the statement that the reaction here shown was very suggestive and might prove to be of much more value in the diagnosis of congenital syphilis than any laboratory reactions previously projected. One must not lose sight of the fact, however, that laboratory tests of the nature of the gold chlorid reaction must always be regarded only as an aid to clinical diagnosis.

From the cases here reported it would seem strongly suggestive that a case showing clinical signs of congenital syphilis could be confirmed by the reaction here noted of the cerebrospinal fluid to the colloidal gold solution of Lange. It is possible that treatment will distinctly modify this reaction but to a much less degree than it would the Wassermann reaction.[2]

122 South Michigan Avenue.

EXPOSURE OF THE BRACHIAL PLEXUS WITH NERVE-TRANSPLANTATION *

HOWARD K. TUTTLE, M.D.
Assistant Physician, Massachusetts State Infirmary
TEWKSBURY, MASS.

Patient.—John P., white, single, aged 30, Polish laborer, was examined Oct. 30, 1912; family and past history were negative. He got into a brawl, Sept. 21, 1912, and received a stab-wound at the base of the neck, above the left clavicle. He was taken to a near-by hospital, and the wound, together with another slight stab-wound of the back, was closed with sutures. Immediately following the injury he had complete motor and partial sensory paralysis of the left arm. He was kept at the hospital for one month, was told that he might require further

2. This work was a corollary of the work done by Dr. Sippy and Dr. Moody in examination of the fluid from cases of paretic dementia and tabes which article appears under the title, The Colloidal Gold Reaction in the Diagnosis of Syphilitic and other Lesions of the Cerebrospinal Nervous System, Presentation of the Various Reactions and Report of Cases, Transactions of the American Association of Physicians, 1913.

* Read before the North Middlesex Medical Society of Lowell, April 30, 1913.

operation, and then transferred to the city farm, whence he was admitted to the state infirmary. According to patient's statement there was still an area of anesthesia over the arm and shoulder, the strength of his hand was coming back, but he had complete paralysis of the left arm.

Physical Examination.—At the posterior border of the left sternocleidomastoid muscle, 1½ inches above the clavicle, is a healed stab-wound ¾ inch in length, extending diagonally from below upward. There is complete paralysis of the deltoid, biceps, brachialis anticus, supraspinatus, infraspinatus, teres minor, supinator longus, and supinator brevis muscles, causing loss of abduction of the arm, and flexion and supination of the forearm, and an area of anesthesia of the shoulder-cap and upper third of the arm. The patient can raise his shoulder only by shrugging.

Diagnosis.—We are evidently dealing with a section of the fifth and sixth cervical nerves between the posterior thoracic nerve, supplying the serratus magnus muscle, and the suprascapular nerve. The section may be through the fifth and sixth nerves just inside where they join to form the upper trunk, or it may be through the upper trunk itself.

The patient was observed for one week without the least sign of improvement, and operation was advised.

Operation.—Nov. 8, 1912.—At patient's request ether was administered. Incision was made from one inch below the mastoid, parallel with the posterior border of the sternocleidomastoid muscle, downward over the clavicle. The posterior triangle of the neck was fully exposed, the posterior belly of the omohyoid muscle retracted downward, and the brachial plexus exposed. The fifth and sixth cervical nerves were found to be completely severed just above the upper trunk. The approximal ends of the severed nerves had retracted to the spinal column. The distal end showed a fibrous degeneration for three-quarters of an inch. On account of the retraction and the degeneration it was impossible to unite the cut ends directly, or by a neuroplastic operation. The distance from the spinal accessory to the distal end of the upper trunk below the degeneration was so great that it would put a large amount of tension on the nerve sutures, if such a procedure were attempted. The distal end of the upper trunk was split longitudinally for about one-half inch below the degeneration, and the anterior terminal branch of the fourth cervical nerve was severed and implanted into the split upper trunk, and sutured with Pagenstecher linen. The deep fascia was closed with continuous plain catgut and the skin was closed with interrupted silkworm gut. One small cigarette drain was left in the lower angle of the wound, and a dry sterile dressing applied.

Postoperative History.—Nov. 10, 1912: Drainage taken out; wound clean.

Nov. 17, 1912: Stitches out. First intention healing shown.

Nov. 30, 1912: Pronation and supination of forearm returning. Hand-grasp much stronger.

Dec. 3, 1912: Patient beginning to flex his forearm. "Pins and needles" sensation down the arm. Sensation returning over upper arm and shoulder.

Dec. 26, 1912: Patient receiving faradic current to muscles of arm and forearm biweekly. Area of anesthesia over shoulder-cap decreasing, flexion of forearm stronger, and beginning abduction of the arm.

Jan. 25, 1913: Improvement has been slow, but steady. Patient says he can feel that he is growing stronger every day. He is still receiving faradic current biweekly, and strychnin, one-fifteenth grain, hypodermically, daily.

March 23, 1913: Patient has asked for his discharge as he has been working for the past month in the institution blacksmith-shop and finds that he can do a little more, and is a little stronger in his left arm every day. Physical examination on discharge shows atrophy of the deltoid muscle, with loosening of the shoulder-joint ligaments, and joint-crepitus. There is atrophy of the biceps, but not so marked as of the deltoid. There is no area of complete anesthesia now, although over the shoulder-cap the patient says he feels a pin-point sensation deep in, rather than on the skin surface. Grasp of the left hand is strong and supination and pronation are good. Flexion of the forearm with the hand supinated is hard, but has come within the last few days. Patient says that he lays his arm flat on the bed before getting up in the morning, and flexes the forearm four times. He further flexes his forearm by a motion combined with adduction across his chest, and this is fairly strong. There is slight abduction, about ten or twelve inches from the side.

AFTER-HISTORY AND COMMENT

Incised and puncture wounds of the brachial plexus are rather uncommon, and are usually caused by stab- or bullet wounds. The histologic changes taking place in the distal portion of the divided nerve are swelling of the nuclei of the nerve-cells, irregular beading of the myelin, with final separation of the myelin transversely. Faradic muscular contractions are lost in a few days. This degeneration may be rapid in some cases, or more gradual in others. The symptoms following section of spinal nerves are loss of motion, sensation, muscle reflexes and, later trophic changes in joints, muscles, skin, and its appendages.

In this case we found marked retraction of the approximal end, with a fibrous-appearing degeneration of the distal end of three-fourths of an inch, and the time intervening between the date of injury and the date of operation was only forty-eight days.

TREATMENT OF NERVE-SECTION

The treatment of nerve-section is always nerve-suture. This may be primary or secondary. In selecting the time for secondary suture, much must depend on the signs of regeneration we get following the injury. Horsley advises waiting for eighteen months. If, after a moderate length of time, we see no improvement, or the improvement due to other nerve fibers taking the place of the severed nerve has reached its limit, we are justified in exploring to learn the condition. At operation we have several methods open to use. We can suture the cut nerve end-to-end, if the operation is undertaken immediately following the injury. If this is made impossible by retraction and degeneration, we can lengthen the cut nerve-ends by a neuroplastic operation. We can resort to a nerve anastomosis or a nerve transplantation.

In this particular case, end-to-end suture was impossible on account of retraction and degeneration, as was a neuroplastic operation, it being impossible to get hold of the approximal end, owing to the retraction. Anastomosis with the spinal accessory could not have been accomplished without considerable tension being put on the sutures, with the danger of having the sutured ends become separated. The only method left was the transplanting of an end branch of the spinal nerve directly above into the distal end of the cut nerve below the area of degeneration. This was done without causing undue tension, and trusting that our transplanted nerve contained both motor and sensory fibers.

PROGNOSIS

In the matter of prognosis we must not promise or expect too much. Much depends on whether or not we have any suppuration present with the consequent formation of scar tissue. In the most favorable cases, referring especially to those in which secondary suture is done, we rarely see complete restoration of function. Following operation we may have to wait some time for an encouraging sign that we are going to be partially successful. In this case, returning strength in supinating and pronating the forearm, and stronger hand-grasp were noticed by the patient within twenty-two days.

This may have been partially due to the removal of pressure from scar tissue at the time of operation. In twenty-five days the patient noticed the "pins and needles" sensations extending down the arm, and returning sensation over the area previously void of sensation. With this soon followed the muscle response to the faradic current where previously none could be elicited. From this point strength gradually returned to the paralyzed muscles, very slow to be sure, but to that extent that the patient noticed that he was a little stronger each day, and that he could accomplish things that were previously impossible. At the time of his discharge, the comparison was that of a man who at the time of his admission, could move his left arm only by swinging his body, with a man who, in 133 days following operation, was able to work in a blacksmith shop, and use his arm very handily. He was told that improvement would probably continue to a considerable extent, but that the deltoid muscle would always function but poorly, and the biceps never to its full previous use.

SUMMARY

The case forcibly illustrates two points: first, the mistake in closing the skin wound at the time of injury without exploring fully the extent of the damage, with immediate nerve-suture, a neglect which may be compared with the suturing of incised wounds of the wrist and leaving the cut tendons disunited; second, the results we may get in cases that seem almost hopeless, and the fact that even a long chance is worth taking.

THE TREATMENT OF PROFUSE KIDNEY HEMORRHAGE BY MEANS OF EPINEPHRIN

HERMAN L. KRETSCHMER, M.D.
Urologist to Presbyterian Hospital; Genito-Urinary Surgeon to Alexian Brothers Hospital
CHICAGO

The rather remarkable results obtained in treating the following case of profuse, painless hematuria by means of injections of epinephrin directly into the pelvis of the kidney through the ureteral catheter seem worthy of report.

REPORT OF CASE

History.—At the age of 15 the patient was very much run down and delicate. At that time she had some frequency of urination accompanied with burning pain. There was no history of traumatism. The patient's only complaint was the presence of blood in the urine. There never had been any urinary symptoms. For the past four months she was obliged at times to arise once at night to void. Seventeen years ago, during her first pregnancy, the patient had her initial onset of hematuria. This occurred during the sixth month of the pregnancy. At this time the hematuria was intermittent, lasting only a few days or a week. The hematuria disappeared with the termination of the pregnancy. The second attack of hematuria appeared with her second pregnancy. At this time it was first noticed during the second month, and it was irregular as with the first pregnancy. After her confinement she felt perfectly well and the urine remained clear. During her third pregnancy she was relatively free from hematuria, having only an occasional attack, very mild in character. With the fourth pregnancy, the hematuria started at the beginning of the pregnancy and continued until life was felt. There was no more hematuria after this until the fifth pregnancy, when the attack was very mild. After the sixth pregnancy she was perfectly well until June, 1911, when she again had hematuria. This continued daily until February, 1912. From that time to July, 1912, she was well and the urine was free from blood. Her last attack came on in July, 1912, and hematuria has been constantly present ever since. Since the hematuria began she has been free from headaches, of which she complained prior to its onset. In September, 1912, the patient had some pain in the left lower quadrant of the abdomen. The pain started after urination and was so severe that she was obliged to call a physician.

Examination.—Temperature was 98.6 F., pulse not recorded. Blood-pressure was 128 mm., and hemoglobin 50 per cent. The heart, lungs and abdomen were negative. The patient had a very marked anemia. Cystoscopy revealed the bladder and ureteral orifices negative. A double ureteral catheterization was done. The catheters entered the ureteral orifices and passed into the pelves of the kidneys without any obstruction. The urine from the right ureter was clear, contained a few red blood-cells, albumin, no sugar and no casts. The urine from the left ureter contained practically pure blood. Examination of the urine for tubercle bacilli was negative. The Roentgen-ray examination was negative.

Treatment and Course.—Because of the patient's bad general condition and the further fact that she refused to consider any eventual surgical measures, it was decided, if possible, to stop or control the hemorrhage by injecting into the pelvis of the left kidney through the ureteral catheter epinephrin (adrenalin, P. D. & Co.) solution. Five c.c. of a solution consisting of 50 per cent. epinephrin and 50 per cent. salt solution were injected into the pelvis of the left kidney, and the patient was put to bed. The next day the amount of blood in the urine had materially diminished. Three days later the left ureter was again catheterized, and 5 c.c. of 50 per cent. epinephrin in salt solution were injected as before. Following this injection there was a marked diminution in the amount of blood in the urine, as compared with the specimens obtained through the ureter catheter and the voided specimens obtained before the treatment was instituted. Four days later there was still some blood in the urine. Cystoscopy was again done and another injection of epinephrin solution of the same strength was given. The next day the urine was perfectly clear to the naked eye. The centrifugalized specimens obtained for the next three or four days showed the presence of only an occasional red blood-cell. No casts were found.

COMMENT AND CONCLUSIONS

The occurrence of blood of renal origin showing in the urine during pregnancy has been reported at various times. Most of these cases show inflammatory changes in the kidney. Occasionally one reads in the literature reports in which patients of this class have been subjected to a removal of the kidney because of the hematuria. Not only in the cases following pregnancy is nephrectomy resorted to, but in other cases in which the hemorrhage becomes profuse with no apparent clinical cause for the hematuria.

The simplicity of the treatment with epinephrin injections is at once apparent and its advantages may be said to be the following:

1. If by this simple procedure we are able to control the renal bleeding, the condition of the patient's urine may be studied at a time when it is free from large quantities of blood.

2. In cases in which there is a severe degree of secondary anemia, due to the loss of large quantities of blood, the patient may be put on a general tonic treatment besides the epinephrin treatment, until such improvement is reached as will render operation a safe procedure.

3. It may be the means of avoiding nephrectomy.

It is not to be inferred that epinephrin is to be considered a specific in every case of renal hemorrhage, as we know that many of these cases are due to tumor, tuberculosis and stone. Obviously to treat in this man-

ner cases due to the causes just mentioned would be a mistake, but the treatment might be employed temporarily, at least until a positive diagnosis of the cause of the bleeding can be made.

A somewhat analogous case has been previously reported by Young of Baltimore.[1]

2218 Clifton Avenue.

PURPURA, URTICARIA AND ANGIONEUROTIC EDEMA OF THE HANDS AND FEET IN A NURSING BABY

IRVING M. SNOW, M.D.
BUFFALO

I wish to report a rare type of purpura and urticaria associated with angioneurotic edema of the hands and feet and other regions.

The patient was a boy, aged 6 months, strong and fat, nursed by a healthy mother.

First day: On December 14 a dark, brawny swelling appeared, first in the left foot and then in the right foot. The child seemed ill and cried from pain in his feet. A few hours later a dark red edema involved the scrotum, and an erythema developed on the thighs and buttocks. The baby was given two doses of castor oil, 15 c.c. each, also an enema which caused a normal stool.

Second day: In addition to the edema of the feet and genitals both eyes were closed by an effusion into the lids. The child was in continual misery from the tender ankles and refused to nurse. Fifteen c.c. of castor oil produced three light-colored stools containing mucus and a minute reddish flake, possibly blood.

Third day: Rectal temperature was 100.5; abdomen, heart and lungs normal. The puffiness in the eyelids had lessened. Both ears were swollen with a dark red erythema. There was an ecchymosis the size of a half dollar in each cheek. The scrotum was almost of a normal size and color. On the back, buttocks and posterior portion of the thigh were numerous dark infiltrated hemorrhagic areas the size of a quarter of a dollar. Both legs were thickly sprinkled with large red papules about 3 mm. in diameter; these evidently itched. Both feet and ankles were greatly swollen and very painful. Here the skin was of a normal color. No abdominal pain or tenderness could be elicited. The urine was scanty and could not be procured.

Fourth day: The baby refused the breast and was in great distress, unless quieted with heroin. The edema in the eyelids and ears was hardly noticeable. As a result of a pin-scratch a broad, dark ecchymosis 7.5 cm. by 0.5 cm. had appeared on the anterior surface of the right thigh. The purpura of the cheeks, back, buttocks and thighs was unchanged. More papules had developed on the legs. Feet and ankles showed no change. Both hands had commenced to swell, the right first.

Fifth day: Baby was asleep from heroin. The most prominent symptom was an enormous swelling of both hands and wrists which had increased so rapidly that the wristbands of the sleeves had to be cut off, leaving a livid constriction in the flesh. All joints in the fingers, hands and wrists were freely movable, but manipulation seemed very distressing. The swelling of the right hand was hard and dark; the color did not change on pressure. In the left hand the edema was equally firm but of a lighter red, which disappeared on pressure. Both legs were covered with urticarial wheals, some of which quickly become hemorrhagic. Mixed with the wheals, but fewer in number, were small petechiae.

Seventh day: The brawny swelling of the hands lasted two days and disappeared. There was no pain in moving either hands or feet. the purpura of the cheeks, back and buttocks was fading; there were new hemorrhagic papules on the legs. The baby was obstinately constipated, probably from opium. It would nurse only after the bowels had moved; there were four laxative stools, large and foul-smelling; there was no blood in them.

Tenth day: Baby very comfortable; sleeping and nursing well; defecation and urination in order. The only relics of the illness were faint stains on the site of the old hemorrhages and a fine papular skin infiltration on the legs.

The child's general condition has remained good, and there has been no recurrence of the skin lesions.

This illness ran its course without fever; no urinary or blood examination could be made. It is practically certain that no serious hemorrhagic nephritis was present as the diapers were not stained by the urine.

SUMMARY

The patient, a fat baby thriving on its mother's milk, was suddenly attacked by purpura, urticaria and localized edema, lasting about ten days. There were only systemic symptoms from the result of pain. At first the bowels were obstinately constipated, possibly from an edema of the intestinal walls sufficient to inhibit peristalsis, but not of enough intensity to cause colic or hemorrhages as is observed in Henoch's purpura.

The skin lesions were (1) an angioneurotic edema of the scrotum, both ears, eyelids, hands and feet; these regions were also discolored by a hyperemia which in the right hand became a brawny hemorrhagic infiltration; (2) numerous papules on the legs; (3) subcutaneous hemorrhages in the cheek, back, buttocks and thighs; (4) the tendency to capillary oozing in the skin, which was so great that a slight pin-scratch caused a long ecchymosis.

The joint symptoms should not be dignified by the title of arthritis; there was a rapid serous effusion into the skin, subcutaneous tissues and peri-articular and articular surfaces of the hands and feet.

The swelling of the feet came first, lasting six days. On the fourth day of the illness both hands were involved. Here the edema remained for three days and was almost hemorrhagic in type. The scrotum, ears, and eyelids were the seat of a transitory edema. Purpura appeared in the face, back and thighs. An urticaria covered both legs.

It should be noted that except in the genitals the skin and joint lesions were symmetrical. All of the symptoms probably belonged to the erythematous group described by Osler, a hemorrhagic type of an exudative diathesis; namely, a vascular dilatation and exudation due to disturbance of vascular tonus producing hyperemia and serous and hemorrhagic effusions.

In a general angioneurotic disturbance there is an abnormal tendency of the skin, subcutaneous, mucous and articular tissue to react to varied systemic irritants. This toxic influence plays over the peripheral surfaces, producing in some regions localized edemas, on others, urticaria and hemorrhages.

I do not consider the various types of purpura, namely, purpuric arthritis and Henoch's purpura, as distinct pathologic entities. In one region the same toxin may produce an ecchymosis, in another colic and gastro-intestinal hemorrhage, in a third a swollen joint.

The case is reported in full detail not because it is unique, but for the reason that it is a clear-cut example of a purpura and angioneurotic arthritic edema, developing in a young, healthy baby. It is also true that such symptoms might excite unnecessary alarm and false conclusions, were not the short, benign course of the malady well known.

1. Young, Hugh H.: Cure of Renal Hematuria by Injection of Epinephrin (Adrenalin) Through Ureter Catheter, THE JOURNAL A. M. A., May 18, 1907, p. 1654

Numerous medical treatises of which the best is by Pratt, in Osler's Modern Medicine, describe purpura and allied conditions and give illustrative cases, all of which show individuality, and none of which are precisely similar in distribution or character of lesion.

The usual nomenclature and classification of the disease is faulty and leads the enquirer into dire confusion. Nothing definite is known of the etiology. Some authorities claim bacterial infection; others ascribe the symptoms to systemic intoxications of undiscovered origin. Both causes may undoubtedly produce the same lesion. The purpura of a drug rash or scurvy may resemble those of measles or small-pox.

Why a healthy, breast-fed baby should develop purpura, urticaria and swollen joints and recover so quickly, I am unable to explain. It had no fever or digestive disturbance and the function of the kidneys was not disturbed. These facts are against the theory of infection or intoxication.

In this connection a short allusion may be made to Henoch's purpura, in which the purpura is associated with gastro-intestinal crises, acute abdominal pain, vomiting of blood and intestinal hemorrhages. There may be also abdominal tenderness and such obstinate constipation that an intestinal obstruction is suspected, or in a baby the colic, vomiting and bloody stools may simulate the clinical picture of an intussusception.

With these symptoms the experienced clinician might consider operative treatment, but he should also recall the visceral symptoms of the exudative diathesis and look for ecchymosis and localized edemas and a hemorrhagic nephritis. The intestinal symptoms may be caused by an edema of the gastro-enteric mucosa.

Henoch's purpura has a certain surgical importance, for several patients have been operated on for intestinal obstruction and the procedure has done the patient little good. The diagnosis is sometimes made easier by a history of previous attacks, for the condition often recurs. If Henoch's purpura is correctly diagnosed and the patient left alone a prompt recovery is the rule.

ILLUSTRATIVE PERSONAL CASE OF HENOCH'S PURPURA

A girl 2 years old was attacked with an urticarial rash on the flexor surfaces of the thighs. The urticaria was quickly followed by large ecchymoses mixed with petechiae appearing on the chest, abdomen and back.

The purpura faded and was succeeded by a livid swelling of both ears and the right eyelid. About the eighth day of the illness the child commenced to vomit blood and pass two or three bloody mucous stools a day. The gastro-enteric symptoms continued three or four days and ceased abruptly.

During the illness the child was apathetic and somnolent; there was no fever, hematuria or abdominal tenderness.

The child made a complete recovery.

This case differed from Henoch's description, there being no abdominal pain. It is evident that a large number of cases of purpura will show a wide variation in symptoms.

476 Franklin Street.

Medical Frauds and Fakers in Michigan.—We doubt that there is a state in the Union so thoroughly infested and infected with medical frauds and medical fakers as is Michigan. For five years the question has been persistently asked, "What is the matter with Michigan?" The answer to this question must be either that the people of Michigan are the most gullible, most willing to be defrauded, or that our Michigan laws are the most tolerant in the United States. While observation proves that we are, as a people, "easy," so to speak, we believe that the great fault is in the absence of laws to restrain these worse than thieves, medical frauds and liars.—*Pub. Health Bull., Michigan.*

THE COCK'S-COMB TEST FOR THE ACTIVITY OF ERGOT PREPARATIONS*

ALBERT C. CRAWFORD, M.D., AND JAMES P. CRAWFORD, A.B.

STANFORD UNIVERSITY, CALIF.

There can be no question as to the value of biologic tests provided we know for what we are testing; thus, in the case of adrenal glands, in which at least one active principle is known, we can say that preparations of this gland have a blood-pressure-raising activity corresponding to a definite amount of epinephrin. As a rule, the depressor principle[1] in these preparations is believed to be negligible, so that we speak of them as containing so much of the pressor compound, and do not consider their action as a resultant of these two factors. Elliott[2] has asserted that by using a biologic method for testing epinephrin solutions he can assay them to within .01 mg. of their correct strength.

In the case of preparations of ergot and of digitalis the question is much more complicated, as these drugs are believed to owe their activity to several constituents, which vary in activity. From ergot, Barger, Carr and Dale, simultaneously with Kraft, have isolated two alkaloids, ergotinin and ergotoxin. The first was found to be physiologically inactive,[3] while the second exerted all the characteristic actions of ergot, that is, solutions of this alkaloid would cause uterine contractions, a rise in blood-pressure and bluing of the cock's comb.

Kraft claimed that while his hydro-ergotinin, afterward found to be identical with ergotoxin, would blue the cock's comb, it failed to produce uterine contractions, save when used in toxic doses, so that according to him the activity of ergot in causing uterine contractions could not be traced to this body.[4] This conclusion was presumably due to the fact that his preparations were tested on a different species of animal from those on which Dale tested ergotoxin. The total amount of alkaloids obtained from ergot is said to vary from 0.05 to 0.2 per cent.[5]

Barger and Dale noted that all the activity of aqueous preparations of ergot could not be explained by the mere presence of ergotoxin and presupposed the existence of some then unknown compound. It was found that this action was due primarily to para-hydroxyphenylethylamin, but that some was due to iso-amylamin and phenylethylamin. Later Barger isolated beta-iminazolylethylamin from a dialyzed ergot preparation. This compound causes marked uterine contractions in the cat's uterus *in situ*. These workers published no quantitative determination of the amount of the amins present in ergot preparations. It is believed that these amins result from decomposition of various amino-acids in ergot, but the question arises as to whether ergo-

---

* From the Laboratory of Pharmacology, Leland Stanford Junior University.

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Sixty-Fourth Annual Session, held at Minneapolis, June, 1913.

1. Studzinski, J.: Ueber die Blutdruckherabsetzende Wirkung der Nebennieren, Arch. f. exper. Path., 1912, lv, 155.

2. Elliott, T. R.: Control of the Suprarenal Glands by the Splanchnic Nerves, Jour. Physiol., 1912, xliv, 378.

3. Tanret has asserted that the reason ergotinin has been found inactive is that it is insoluble in water, hence cannot act, but that if it is dissolved in its weight of lactic acid and water is then added, such solution is active. Tanret, C.: Sur l'ergotinine cristallisée, Bull. Soc. Pharmacol., 1911, xviii, 20.

4. For literature on ergot see Crawford, A. C.: Review of the Chemical Work Done on the Active Principle of Ergot, Am. Jour. Pharm., 1911, lxxxiii, 147

5. Kazay, A.: Die wirksamen Bestandteile der Mutterkornpräparate und deren Wertbestimmung, Ztschr. d. allg. oesterr. Apoth.-Ver., 1910, xlviii, 547

toxin may not really be a compound similar to the polypeptids and yield these amins on decomposition. Mr. W. I. Weaver, one of our students, has made several unsuccessful attempts to obtain beta-iminazolylethylamin from ergotoxin. He has obtained from ergotoxin, however, a coloring-matter apparently identical with the so-called sclererythrin.

Recently Marino-Zuco and Pasquero claimed to have isolated from ergot an active glucosid, clavisepsin,[6] but as yet this work has not been repeated by other investigators. It remains to be seen whether or not this glucosid will yield these amins.

The cock's-comb test was introduced as a qualitative means for determining the activity of ergot, as it was believed that the production of uterine contractions and of gangrene were the characteristic features of ergot poisoning, but more careful study of such cases shows that gangrene and uterine contractions, at least strong enough to produce abortion, do not occur in all cases of ergot poisoning in man. Again, at the time this test was introduced it was not possible to use the uterus in satisfactory biologic testing; hence, the cock's-comb test has been accepted provisionally, mainly because we knew of no other which was practical. Later it was believed to be roughly quantitative. Recently it has been shown that the uterus can be used for testing the action of various drugs. The action of ergot on the blood-pressure has also been proposed as a means of standardizing such preparations. These methods have been discussed in detail, theoretically by Crawford,[7] and tested practically by Goodale, Cronyn and Henderson, and more recently by Edmunds and Hale, and by Haskell and Eckler. Cronyn and Henderson state that the variations are so large as to be serious from a therapeutic aspect" (p. 210), and that, when tested on the cat's uterus the activity of ergot preparations "seemed to parallel their action on the blood-pressure quantitatively" (p. 208).

Against this view it may be urged that while beta-iminazolylethylamin causes marked contractions of the uterus it lowers the systemic blood-pressure, hence would probably interfere with the blood-pressure test.

Edmunds and Hale say that "the uterine response to ergot seems to run very closely parallel to the action on the cock's comb so that either may be used in ergot assay, and the choice between these for practical purposes would favor the cock's-comb method" (p. 46), but add that "the evidence . . . is against the view that an absolute parallelism exists between the uterine and blood-pressure action of ergot" (p. 43).

At present there seems to be considerable confusion as to the action of ergot on the cock's comb. Small doses cause bluing, which may last for a few hours, and this in some cases is preceded by a temporary whitening, while repeated doses produce gangrene with permanent bluing and histologic changes.

Von Recklinghausen[8] found, in chronic ergot poisoning of cocks, that the larger arteries of the tips of the comb, but not the veins, were more or less completely filled with hyaline material, while the capillaries, which were filled with red cells, contained no hyaline substance. The veins also contained no hyalin. These results were corroborated by those of Gruenfeld.[9] From these anatomic changes von Recklinghausen argued that the gangrene was due to a persistent spasm of the small arteries and this view has been accepted almost to the present time. It must be remembered, however, that in cocks thrombi form under a variety of conditions (Krysinski).

In the temporary bluing produced by ergot no histologic changes indicative of gangrene have been found;[10] and it is impossible to see how the red color could return quickly if hyalin had formed. The ordinary bluing of the comb is not identical with gangrene (Krysinski). The cock's comb test seemed satisfactory because we knew that purified ergot preparations would cause a rise in blood-pressure, mainly from vascular constriction and the bluing of the comb, according to von Recklinghausen, was due to vasoconstriction. In reviewing the literature of ergot it was noted that several workers had reported that in deaths in animals from acute experimental ergot-poisoning the only lesions were marked venous dilatation with occasional ecchymoses.[11] It would seem that if arterial constriction was the primary factor there should be more persistent blanching, unless the arterial blood, forced by constricted arteries, was held in dilated veins; that is, unless the venous dilatation was marked and overcame the blanching due to arterial constriction.

We have made a number of attempts to measure the size of the comb during the stage of temporary bluing, but as yet, owing to defects in the oncometer, the results do not warrant any definite conclusions. Bluing of the comb has been seen in poisoning of cocks by cantharidin, a substance which does not raise the blood-pressure in these animals, but which exerts a direct injurious action on the capillary walls.[12] In rabbits repeated injections of ergot solutions are said to cause arterial degeneration.[13]

A solution of one tabloid of ergotoxin (1/100 grain) in 2 c.c. of water was slowly injected intravenously into a rooster, and while the blood-pressure rose markedly, even seven minutes after the injection was begun, the comb was still red, although it seemed blanched.[14] Later the comb became blue, but at this time other chemicals had been injected.

In several experiments on cocks we have noted that paraldehyd would cause bluing of the comb, and for this reason we discarded its use for anesthetizing these animals. Wernich dissected the artery and vein of one part of the rabbit and noted that after the subcutaneous injection of an aqueous extract of ergot the artery was slightly narrower, while the vein dilated. This prepara-

6. Marino-Zuco, F., and Pasquero, V.: Sulla Clavisepsina, Gazz. chem. ital., 1911, xli, 318.

7. Crawford, A. C.: Notes on Physiological Testing, Am. Jour. Pharm., 1908, p. 321. Goodale, A.: Pharmacological Estimate of the Value of Commercial Samples of the Liquid Extract of Ergot, Edin. Med. Jour., 1909, New Series, iii, 20. Cronyn, W. H., and Henderson, V. C.: Ergot, Jour. Pharmacol., 1909, i, 203. Haskell, C. C., and Eckler, C. R.: Relative Strength of Fresh and Old Samples of Ergot, Jour. Am. Pharm. Assn., 1912, i, 412. Edmunds, C. W., and Hale, W.: Physiological Standardization of Ergot, Bull. Hyg. Lab., U. S. P. H. and M.-H. S., 1911, No. 76. Dale, H. H.: Ergot and Its Active Principles, Jour. Am. Pharm. Assn., 1912, i, 1212.

8. Von Recklinghausen, F.: Handbuch der allgemeinen Pathologie, Deutsch. Ztschr. f. Chir., 1883.

9. Gruenfeld, A.: Ueber die anatomischen Veränderungen bei chronischer Sphacelinvergiftung, Arb. des Pharmakol. Inst. z. Dorpat, iv, 1890.

10. Krysinski, S.: Pathologische und kritische Beiträge zur Mutterkornfrage, p. 75.

11. Montanari, G.: Delle alterazioni materiali prodotte per l'uso della segala cornuta sugli animali vivi, Ann. univ. di med. d'Omodei, 1850, cxxxvi, 402; quoted from Jolly, p. 38. Wernich, A.: Beitrag zur Kenntniss der Ergotinwirkungen, Archiv. f. path. Anat., 1872, lvi, 505. Wernich, A.: Einige Versuchsreihen über das Mutterkorn, Beitr. zur Geburtsh. u. Kynäk., iii, 81, 1874. Boreischa: Ueber die Wirkung des Mutterkorns auf das Gefässsystem, Arb. a. d. pharm. Lab. z. Moskau, 1876, i, 50, quoted from Jolly. See also the reports of autopsies collected by Krysinski, pp. 91, 107, etc.

12. Ellinger, A.: Weitere Studien über Cantharidin, Arch. f. exper. Path., 1908 lviii, 424. Sussnitzki, J.: Das Verhalten der Hühner gegen Cantharidin, Dissert. Koenigsberg, 1903.

13. D'Amato, L.: Neue Untersuchungen über die exper. Pathologie der Blutgefässe, Arch. f. path. Anat., 1908, excii, 92.

14. For details as to the blood-pressure in birds, see Stübel, J.: Beiträge zur Kenntnis der Physiologie des Blutkreislaufes der Vögel, Habilitationsschrift, Jena, 1910.

tion of Wernich's, however, contained some glycerin, which must be considered in interpreting his results. A preliminary blanching is often reported as preceding the bluing of the comb, hence some arterial constriction may be present. If the bluing of the cock's comb is primarily a vasoconstrictor phenomenon, it would follow that the intravenous injection of epinephrin would produce it, at least, if these vessels are under sympathetic control. But bluing did not immediately follow the intravenous injection of epinephrin into the vein of a white Leghorn rooster, although the experiments of Paton and Watson[15] have shown that epinephrin constricts the peripheral vessels of birds. Bluing did occur, however, after the rise in blood-pressure had begun to subside. Numerous workers have noted that in mammals, following the rise of blood-pressure from epinephrin, there is a marked vascular relaxation, and Erb[16] found venous dilatation in rabbits which had been frequently injected with epinephrin. Theoretically considered, bluing might result from changes in the blood, but for this view there is no experimental evidence.[17] In man, however, gangrene has occurred in carbon monoxid poisoning.[18]

Bluing of the comb from even small doses of ergot would seem to be a feature of intoxication, because severe constitutional symptoms usually accompany it. Perhaps the bluing may be explained as a venous dilatation, but the cause of this venous hyperemia is unknown. Theoretically considered, this may result from active dilatation of the veins, or from venous obstruction, or from weakening of the arterial current, either by arterial relaxation or by cardiac weakening. Apparently the condition seems to resemble that described by Henderson in shock in mammals. The fact that after repeated ergot injections the comb hypertrophies[19] would suggest venous hyperemia (Bier's method).

It is believed that para-hydroxyphenylethylamin and beta-iminazolylethylamin are the most important of the ergot amins and that the activity of some preparations of ergot is largely due to these compounds, although part is due to ergotoxin, and that only small amounts of iso-amylamin and phenylethylamin are present in such extracts. If this is true, then the value of the cock's-comb test must depend on whether these amins will produce bluing of the cock's comb, or intensify this action of ergotoxin; but so far as we can learn no such experiments have yet been made with these amino-compounds.

HYDROXYPHENYLETHYLAMIN

Tyramin is said by the manufacturers to be synthetic para-hydroxyphenylethylamin.

EXPERIMENT 1.—On Oct. 16, 1911, a game-cock (weight 1.2 kg.) was subcutaneously injected with a solution of one "tabloid" (5 mg.) of tyramin (Burroughs, Wellcome & Co.) and, though the animal was kept under observation for two hours, there was no bluing of the comb or wattles. Some mucous stools were passed.

On Oct. 19, 1911, the same rooster was injected with a solution of two "tabloids" (10 mg.) of tyramin. This injection was also negative save for the production of diarrhea.

On Oct. 23, 1911, this rooster weighed 1.4 kg. and received subcutaneously a solution of three tabloids (15 mg.) of tyramin. It produced no noticeable effect.

EXPERIMENT 2.—On Oct. 24, 1911, a white Leghorn rooster (weight 1.6 kg.) was injected subcutaneously at 2.19 p. m. with a solution of 5 tabloids of tyramin (25 mg.). At 2:36 p. m. the breathing was apparently deeper. At 3:20 p. m. the comb and wattles seemed normal. The head of the rooster then fell and he seemed sleepy, but still stood on his feet. At 4:00 p. m. he inclined slightly forward as if asleep. At 4:47 p. m. the rooster was very dull and would stay on his side if so placed. The comb and wattles were red and warm. The mouth was closed and apparently there was no dyspnea, the effects of the drug differing in this respect from those of ergotoxin. The animal made no attempt to escape when freed from restraint. At 5:10 p. m. he appeared normal. At no time was there any mucous diarrhea and the color of the comb and of the wattles remained unchanged.

EXPERIMENT 3.—The intravenous injection of 5 mg. and also of 10 mg. of tyramin into an anesthetized rooster (weight 1.5 kg.) caused a distinct rise in blood-pressure without bluing the comb.

ISO-AMYLAMIN HYDROCHLORID

EXPERIMENTS 4, 5, 6 AND 7.—On Oct. 24, 1911, a white Leghorn rooster (weight 2 kg.) was injected subcutaneously with a solution of 50 mg. of isoamylamin hydrochlorid (Kahlbaum). This animal was kept under observation for one hour, but there were no noticeable effects. A similar negative experiment resulted from the injection of 48 mg. of this salt into a white Leghorn rooster (weight 1.7 kg.). On May 22, 1913, a white Leghorn rooster (weight 1.9 kg.) was injected subcutaneously with a solution of 80 mg. iso-amylamin hydrochlorid, but this produced no effect. A similar experiment with 130 mg. also proved negative (weight of Rooster 1.7 kg.).

ERGOTOXIN

EXPERIMENT 8.—On Oct. 26, 1912, a white Leghorn rooster (weight 1.7 kg.) received subcutaneously an injection of one tabloid of ergotoxin (Burroughs, Wellcome & Co.) dissolved in water with two drops of 10 per cent. solution of sodium hydroxid. Each tabloid was said to contain 1/100 grain of ergotoxin. In one hour there was some slight bluing of the tips of the comb, and the wattles became cooler. There was some diarrhea. About forty-five minutes later the bluing became very faint. This rooster had been injected on October 25 with 48 mg. iso-amylamin hydrochlorid.

EXPERIMENT 9.—On October 25, the game-cock (weight 1.2 kg.) which had been used October 25 for the injection of tyramin received subcutaneously a solution of one tabloid ergotoxin (1/100 grain). One hour later the comb was a trifle bluer, but nothing striking was seen even two hours after the injection.

EXPERIMENT 10.—On October 25, a white Leghorn rooster (weight 1.9 kg.) received subcutaneously a solution of two tabloids of ergotoxin. These tabloids formed a colloidal solution with water, so that the full effect of the ergotoxin could not be expected. In one hour and twenty-six minutes the comb was slightly blue and cool, while the wattles, which before the injection had been red and warm, became cool, although they retained their red color.

EXPERIMENT 11.—On February 14, a white Leghorn rooster was injected with a solution of three tabloids of ergotoxin. One hour and eighteen minutes later there was slight bluing of the tips of the comb, but they became decidedly blue one half hour later.

EXPERIMENT 12.—On October 30, a white Leghorn rooster (weight 2.1 kg.) was injected subcutaneously with a solution of three tabloids of ergotoxin dissolved with 1 c.c. of 80 per cent. alcohol. Within fifty-two minutes the wattles and comb became blue and cold. The rooster stood motionless and the mouth was kept closed.

EXPERIMENT 13.—On October 30, a white Leghorn rooster received an injection of a solution of five tabloids of ergotoxin in 1 c.c. of 80 per cent. alcohol with water. In one and a half hours the comb and wattles became blue and cold. The rooster

15. Paton, D. N., and Watson, A.: Actions of Pituitrin, Adrenalin, and Barium on the Circulation of the Bird, Jour. Physiol., 1912, xliv, 413.
16. Erb, W., Jr.: Experimentelle und histologische Studien über Arterienerkrankung nach Adrenalininjektionen, Arch. f. exper. Path., 1905, liii, 183. Neujean, V.: Contribution à l'étude expérimentale de l'adrénaline, Arch. internat. de pharmacodyn., 1904, xiii, 50.
17. Joliy, P.: Die Einwirkung des Mutterkorns auf die Circulation, Preisschrift, Göttingen, 1905.
18. McLean, A.: Carbon Monoxid Poisoning Resulting in Gangrene of Both Legs, THE JOURNAL A. M. A., May 20, 1911, p. 1455.
19. See Crawford, A. C.: Am. Jour. Pharm., 1908, p. 326.

stood erect and held its mouth open. One hour and three-quarters later the comb was still blue.

Ergotoxin phosphate was bought of Burroughs, Wellcome & Co. and 100 mg. was suspended in 50 c.c. of water.

EXPERIMENT 14.—On Aug. 5, 1912, at 3:30 p. m., a white Leghorn rooster (weight 1.6 kg.) was injected subcutaneously with 2.6 c.c. of this suspension of ergotoxin phosphate (2 mg. in 1 c.c. water). At 4:07 p. m. the comb, which had previously been red and warm, became blue and cold and showed some whitish discoloration. The mouth was held shut. The wattles were blue and cold at 4:35 p. m.; the wattles also blue, and the mouth was open (dyspnea). The rooster was very dull at 5:16 p. m. The blue comb showed white areas, and the wattles were cold and dark. On August 6 at 9 a.m. the comb and wattles were both red, although the comb was cold.

EXPERIMENT 15.—On Aug. 5, 1913, a white Leghorn rooster (weight 1.9 kg.) was injected subcutaneously with 6.4 c.c. (12.8 mg.) of the same suspension. The injection was made at 3:37 p. m. At 4:08 p. m. the comb was very blue and cold, but showed white areas. The wattles were bluish. At 4:35 p. m. the bluing was more marked. The rooster then held its mouth open. At 5:17 p. m. the bluing was still marked. Even during the afternoon of the following day the comb and wattles were blue and cool.

EXPERIMENT 16.—On the same date a white Leghorn rooster (weight 1.6 kg.) was injected subcutaneously with 10.7 c.c. of the same emulsion (21.4 mg.). In twenty-four minutes the comb became decidedly blue and showed white (blanching) areas. The wattles were cold and blue. Soon the head of the rooster fell forward as if he were too dull, or too sick, to hold it up. The mouth was held open. One hour and thirty-two minutes after the injection the comb became lighter in color, but still remained cold. The following morning most of the bluing had disappeared, although part of the comb was very dark and the wattles were cool.

Edmunds has reported that 2 c.c. of certain fluid-extracts of ergot have about the same action on the cock's comb as 5 mg. of ergotoxin phosphate.

To see if the presence of tyramin would intensify the action of ergotoxin these compounds were injected simultaneously.

EXPERIMENT 17.—On Aug. 11, 1912, a white Leghorn rooster (weight 1.5 kg.) was injected subcutaneously at 1:50 p. m. with a solution of one tabloid of tyramin (5 mg.) and one of ergotoxin (1/100 grain). At 2:23 p. m. the tips of the comb were slightly blue and cool and the wattles were cool. At 4:38 p. m. the condition was about the same.

EXPERIMENT 18.—At 1:50 p. m. on the same date a rooster (weight 1.6 kg.) was injected subcutaneously with a solution of three tabloids of tyramin and one of ergotoxin. At 2:22 p. m. the tips of the comb were blue and cool. At 2:45 p. m. the comb was bluish and cold while the wattles were cold. At 3:45 p. m. the condition remained about the same, but at 4:38 p. m. the comb was red though cool, and the wattles were red and cool.

BETA-IMINAZOLYLETHYLAMIN

EXPERIMENT 19.—On May 15, 1913, a white Leghorn rooster (weight 1.8 kg.) received subcutaneously at 1:45 p. m. a solution of 8 mg. beta-iminazolylethylamin. In sixteen minutes the comb became blue and cool, while the wattles were red though cool. This bluing of the comb began to disappear at 2:27 p. m. and had practically disappeared at 3:45 p. m.

EXPERIMENT 20.—On the same day a white Leghorn rooster (weight 2 kg.) was injected at 1:52 p. m. with a solution of 16 mg. of beta-iminazolylethylamin. The comb became blue in twelve minutes. This bluing disappeared at 3:26 p. m.

EXPERIMENT 21.—Another rooster (weight 2.4 kg.) was injected with a solution of 12 mg. at 2:10 p. m. In nine minutes the comb and wattles became very blue and cool. At 3:15 p. m. the animal seemed slightly unsteady on his feet. The bluing disappeared at 4 p. m.

EXPERIMENT 22.—The injection of a solution of 4 mg. of this compound produced no effect on a rooster weighing 1.7 kg. In none of these animals was there any dyspnea, or any of the severe constitutional symptoms which result from the injection of ergotoxin, and the bluing which resulted was much more transitory in action and appeared much more quickly.

EXPERIMENT 23.—The intravenous injection of beta-iminazolylethylamin into the rooster (weight 1.5 kg.) which had previously been injected with tyramin caused a marked fall in blood-pressure with bluing of the comb.

EXPERIMENT 24.—On May 24, 1913, a white Leghorn rooster (weight 1.9 kg.) was injected at 10:25 a. m. with a solution of 12 mg. beta-iminazolylethylamin and two tabloids (1/50 grain) of ergotoxin. In four minutes the tips of the comb became blue. At 10:34 a. m., the comb was very blue and the wattles were dark in color and cooler. At 10:51 a. m., the comb was very blue, but the rooster seemed bright and the mouth was kept closed. At 11.24 a. m. the same condition was present. At 1:35 p. m. the comb was very slightly blue and cold, while the wattles were red, though cold.

EXPERIMENT 25.—On the same day at 10:42 a. m. a white Leghorn rooster (weight 1.5 kg.) was injected subcutaneously with a solution of 6 mg. of beta-iminazolylethylamin with one tabloid of ergotoxin (1/100 grain). In five minutes the tips of the comb became slightly bluer and cool. At 10:58 a. m. the comb was bluer and the edges of the wattles were bluing. At 11:24 a. m. the condition was about the same. At 1:35 p. m. the comb and wattles were slightly blue and cold.

Arguing from these experiments we would say that, if the subcutaneous injection of an ergot preparation was followed in five or six minutes by bluing of the comb, without dyspnea, etc., that beta-iminazolylethylamin was probably present.

It is interesting to note that beta-iminazolylethylamin which produces vasodilatation in carnivora[20] and a fall in blood-pressure in cocks, and paraldehyd, which in large doses also dilates the vessels, caused bluing of the comb, while, on the other hand, the vasoconstrictors, such as tyramin, iso-amylamin and epinephrin, did not cause bluing save in the case of epinephrin, when the bluing occurred late, and after the vasoconstriction had begun to subside. Dale has noted that in cats ergotoxin in small doses will stimulate vasomotor nerve endings, while large amounts will paralyze them, but fowls are said to be resistant to this paralytic action,[21] at least, if measured by the vasomotor reversal test.

Perhaps the bluing of the comb by ergotoxin may be due to the presence in it of a chemical nucleus similar to beta-iminazolylethylamin.

Betain and cholin have been found in ergot by various workers, but Rielander has shown that these bodies, unlike ergot, will not produce local gangrene. We injected subcutaneously 16 mg., and also 20 mg., of cholin hydrochlorid into roosters, but without effect on the comb.

If we accept the view that much of the pressor activity of ergot is due to para-hydroxyphenylethylamin and that this pressor action has therapeutic value and that this amin will produce uterine contractions, then it follows from our experiments that the cock's-comb test cannot be an accurate test for the full physiologic activity of ergot, but it may be of value for determining the presence of ergotoxin or of beta-iminazolylethylamin.

The question to be decided is whether or not we shall standardize for ergotoxin alone. This cannot be fully settled until we know more of the therapeutic value of the ergot constituents,[22] "and in what relative proportions they should occur."

20. Dale, H. H., and Laidlaw, P. P.: Physiologic Action of Beta-Iminazolylethylamin, Jour. Physiol., 1910, xli, 343.
21. Dale, H. H.: Some Physiological Actions of Ergot, Jour. Physiol., 1906, xxxiv, 172.
22. Dale, H. H.: Jour. Am. Pharm. Assn., 1912, i, 1219.

In this country the most popular official preparation of ergot is the fluidextract and this we have tested many times on cocks, but so far as we can remember, bluing never immediately followed the subcutaneous injection of such preparations; hence we would argue that these preparations contained very little, if any, of beta-iminazolylethylamin. It may be noted that beta-iminazolylethylamin was originally obtained from a dialyzed ergot preparation, that is, one which had long been exposed to bacterial changes; whereas the alcohol of the fluidextract would presumably prevent the changes leading to the formation of this compound, so that, for practical purposes, in fluidextract of ergot we probably have to consider only para-hydroxyphenylethylamin and ergotoxin.

Dale and Dixon[23] were unable to produce abortion in pregnant animals by the injection of para-hydroxyphenylamin and Guggenheim[24] reported a similar experience with it in pregnant women; hence unless it acts synergistically and intensifies the uterine action of ergotoxin, we have only the latter to consider and the assay for ergotoxin would be all that we could demand at present.

Some years ago it was shown[25] that in certain ergot preparations all the compounds which caused bluing of the cock's comb could be shaken into alkaline ether (Keller's method) and it was noted that this shaking would cause a rise in blood-pressure. Recently we have found that ergotoxin, tyramin, ergamin and phenylethylamin can be shaken into alkaline ether, but in such a shaking ergotoxin soon took a bluish color, indicating decomposition, and this may perhaps explain some of the results with the Keller method.

Perhaps later experiments may show that we may be able to reach a satisfactory conclusion as to the full physiologic activity of ergot preparations by determining the nitrogen[26] content of the alkaline-ether shaking, or it may be necessary to make two tests, one chemical and one biologic.

23. Dale, H. H., and Dixon, W. E.: Action of Pressor Amins Produced by Putrefaction, Jour. Physiol., 1909, xxxix, 36.
24. Guggenheim, M.: Zur Kenntniss der Wirkung der P-Oxyphenylaethylamins, Therap. Monatsh., 1912, xxvi, 795.
25. Dohme, A. R. L., and Crawford, A. C.: The Active Principle of Ergot, Am. Jour. Pharm., 1902, 503.
26. Kazay, A.: Die wirksamen Bestandteile der Mutterkornpräparate, Ztschr. d. allg. oesterr. Apoth.-Ver., 1910, p. 547.

CLASSIFICATION AND TREATMENT OF NEPHRITIS ACCORDING TO FUNCTIONAL TESTS

MILTON GOLDSMITH, M.D.
PITTSBURGH, PA.

Nephritis may be defined as an affection of both kidneys in which inflammatory changes occur but do not lead to suppuration. Functionally the kidney consists of two distinct apparatus, the tubular and the vascular, the latter comprising the glomeruli with their afferent and efferent branches and the small branches of the renal artery passing between the tubules.

By means of poisonous chemicals it is possible to injure either system at will and to study the other in its normal condition. Salts of chromium or corrosive sublimate cause marked changes in the epithelium of the convoluted tubules, with no changes in the glomeruli. In such a tubular nephritis, large amounts of albumin and casts are found.

On the other hand, a nephritis produced by cantharides or arsenic affects especially the glomeruli, and in this form, known as vascular nephritis, there occurs little albumin and few casts, but many red blood-corpuscles.

A series of experiments recently carried on by Schlayer and his collaborators[1] introduced a means of determining whether in a case of nephritis the tubular or vascular apparatus was especially affected. First, in normal animals, they determined how long a time was required for the elimination of definite amounts of different drugs.

The work finally narrowed down to the use of three substances, of all employed, iodin, sodium chlorid and milk-sugar. The rate of elimination of these substances in healthy animals was found to be a constant one, independent of the amount of water consumed or of the character of the diet; 0.025 gm. potassium iodid or 0.5 gm. sodium chlorid, given intravenously, passed out within twenty-four hours, while 1 gm. milk-sugar, likewise given intravenously, was eliminated within six hours. When these tests were applied to animals suffering with experimental nephritis, it was found that those with the tubular type eliminated milk-sugar within the normal time, whereas the elimination of salt and iodin was greatly delayed. Animals with vascular nephritis, on the contrary, eliminated salt and iodin normally, while milk-sugar excretion was much delayed.

Further experiments showed that not only is elimination affected differently in the two types but also the normal contraction and dilatation of the renal vessels and secretion of urine, in response to various renal stimuli, vary according to whether the tubular or the vascular apparatus is diseased. For instance, it was found that certain diuretics, as epinephrin, cause normally a decrease in the size of the kidney at the time of the rise in blood-pressure, while caffein causes an increase in kidney volume with no change in blood-pressure. In animals with tubular nephritis these changes occurred as in the normal, but in the vascular type the blood-vessels were no longer able to respond to the different stimuli, and contraction, dilatation and secretion became much less or failed altogether. In very mild vascular nephritis, and occasionally in the beginning of a tubular nephritis, these variations occurred with much greater intensity than normal, showing a great irritability of the vascular structures.

This irritability was especially manifest when large amounts of water were given. A normal animal, when given an increased quantity of water, reacts with a corresponding polyuria. When an increased quantity of water was given to animals with experimental nephritis, this response did not occur, except in the extremely mild vascular type and occasionally in the beginning of a tubular nephritis, when the excessive irritability of the vascular structures could be demonstrated in the manner just described.

The experiments were next applied to human beings. First it was ascertained that in persons with healthy kidneys the three substances were eliminated at a definite rate: 0.5 gm. sodium or potassium iodid in from forty to fifty hours, 10 gm. sodium chlorid in thirty-six hours, and 2 gm. milk-sugar in four hours.

In applying the tests to nephritics it was found possible to divide the cases into those with normal elimination of salt and iodin, but with delayed elimination of milk-sugar, and those with normal milk-sugar elimination but delay in excretion of salt and iodin. Each group has associated with it certain clinical manifesta-

1. Schlayer, K.: Neuere klinische Anschauungen über Nephritis, Med. Klin., 1912, viii, No. 37, supplement; abstr., THE JOURNAL A. M. A., Oct. 26, 1912, p. 1583.

tions of nephritis which are not found in the other group, all indicating that the two types of nephritis occur distinctly in the human being, similar to the experimental forms produced in the lower animals.

Before the discussion of these clinical manifestations, a brief reference to the nature of edema may be made.

Edema is a manifestation of water retention; but what causes the edema itself? Large quantities of water may be infused into the body and yet no edema appear. Magnus and Richter were able to produce it experimentally only when in addition to renal poisons, other substances which injured the blood-vessels, as amyl nitrite or chloral hydrate, were administered at the same time. One drug, uranium, has been found to produce nephritis accompanied by edema, and investigation showed the blood-vessels to be damaged as well as the kidneys.

In the occurrence of edema, the question of salt retention must be considered. Widal provoked edema in nephritics by giving them salt. Before edema appears, however, there is what might be called a preedematous stage in which water is retained in the body, and manifested not by edema but by a gain in weight. An adult may in this way retain 6 kg. of water without the occurrence of edema. If now the patient be given salt, the preedematous stage is succeeded by that of visible edema. For this reason the frequent weighing of nephritics, without edema, is important.

We have now to consider the two forms of nephritis clinically. As the type of pure vascular nephritis, that form in which salt and iodin are eliminated normally but in which milk-sugar excretion is delayed, we have the so-called contracted kidney, the chronic interstitial nephritis. Patients with this condition consult the physician because of cardiac symptoms. Examination shows hypertrophy, accentuated aortic second sound, beginning sclerosis of the aorta and peripheral vessels and high blood-pressure. They appear healthy but are of the apoplectic type. Urine is abundant, and of low specific gravity; albumin and casts are rare or entirely absent. Edema is almost always absent, and when present is due to failing cardiac compensation. Hemorrhages from the nose, stomach, uterus, lungs, sclerae and retina, and apoplexy are frequent. True albuminuric retinitis does not occur, nor does uremia except in the terminal stages. Subjective symptoms, as hemicrania, substernal pressure, asthmatic attacks, sleeplessness, angina pectoris and attacks of rudimentary pulmonary edema are frequent. These are commonly looked on as uremic symptoms but are probably vascular phenomena, as are occasional attacks of transient hemianopsia and paresthesia of the hands and feet. As a cramp of the coronary vessels may cause angina pectoris, a cramp of the cerebral vessels may produce transient hemiplegia or aphasia.

All these so-called vascular crises of Pal are the result of the arteriosclerosis and high blood-pressure. An important symptom is that if an increased quantity of water be given it is promptly eliminated; and on the other hand, if the quantity given be suddenly cut down, the subsequent urine will show a distinct rise in specific gravity. In other words, this kidney retains the ability to concentrate the urine; this ability to concentrate is lost in tubular nephritis.

Besides this chronic type, there is an acute vascular nephritis. Following tonsillitis or some cases of scarlet fever, less often after diphtheria or exposure to cold, there appear hematuria, albumin and casts. Edema is slight, if it occurs at all, and disappears very early. The quantity of urine is usually normal, the patients feel well and the mild symptoms are often overlooked. The characteristic thing is the presence of albumin and blood. As in the chronic cases, functional tests show delay in milk-sugar elimination, while salt and iodin are passed out normally. Signs of involvement of the vascular system appear early. Within six or seven weeks a rise of blood-pressure to 140 or 150 mm. Hg may be found, whereas in the ordinary nephritis several months to a year or more may go by before any rise is apparent. Because of the mild symptoms many cases are considered benign, similar to orthostatic albuminuria.

By means of these functional tests such a vascular nephritis can often be demonstrated at the close of many febrile diseases, when clinically no signs of nephritis are evident. The same is true in lead-poisoning. The characteristic early rise in blood-pressure is evidence that the irritant affecting the kidneys affects the general vascular system at the same time, acting somewhat like the toxin of syphilis. It is probable, therefore, that the contracted kidney is only a part of a general blood-vessel affection, the vascular disease with the consecutive cardiac hypertrophy being not subordinate but coordinate.

Occasionally following a vascular nephritis considerable edema may develop, indicating not a new infection but extension of the disease to the tubules. This is easily understood when we remember that the vas efferens of the glomerulus, in its further course, goes to nourish the tubules, so that disease of the glomerular system, extending to the intertubular vessels, may produce nutritional changes in the tubules similar to degeneration of the heart muscle following coronary disease.

Tubular or chloremic nephritis shows functionally delay in elimination of iodids and chlorids, but a normal excretion of milk-sugar. (As sodium chlorid may provoke edema in this class of patients it is better in making the tests to use only the iodids.) Whereas 0.5 gm. of sodium or potassium iodid are normally all eliminated in forty or at the most fifty hours, in these patients the urine will show iodin after sixty, eighty or 100 hours.

Clinically this form shows edema, scanty urine and abundant albumin. The sediment is rich in casts and epithelium, and in the chronic cases contains lipoids. Blood-corpuscles are few or absent. Specific gravity is low, while the sodium chlorid content is greatly lessened. The edema fluid, on the contrary, may contain much sodium chlorid. Cardiac hypertrophy, high blood-pressure, hemorrhages, true albuminuric retinitis and uremia are all absent, except possibly in the terminal stages.

The edema is characteristic; it does not appear especially in the dependent areas, as in cardiac edema, but in the loose connective tissue, as that of the eyelids, buttocks, scrotum, dorsum pedis and around the Achilles tendon. The patients are not dyspneic and cyanotic as in cardiac edema, and the skin is usually warm, though pale. Death is not in uremia but in extreme dropsy with edema of the lungs.

A third form, which still lacks an experimental analogue and is hard to demonstrate functionally, is azotemic nephritis, in which the prevailing symptoms are those of uremia.

Uremia may be defined as a urinary intoxication, through the medium of disintegration products of albumin. Its most characteristic feature is an increase in the rest nitrogen of the blood-serum. If a normal individual be given an excess of nitrogenous food, the excess nitrogen is eliminated through the urine within twenty-four hours. In a patient with azotemic nephritis, several days will be required to eliminate this excess, even though such patients can dispose of a small amount through the skin and bowels. These patients,

on taking albuminous food, suffer exacerbation of their uremic symptoms, these symptoms being headache, great tiredness, disgust for meat, nausea and vomiting. The vomit may smell of ammonia and the stools be strongly alkaline. Later come diarrhea, convulsions and unconsciousness. It is in these cases that true albuminuric retinitis occurs and occasionally hemorrhagic pericarditis and pleuritis. Necropsy often reveals intestinal ulcers. This form may occur without edema or high blood-pressure, and the functional tests show normal elimination of salt and milk-sugar, while autopsy reveals no marked changes in the circulatory system. While we know what parts of the kidney eliminate salt, iodine and milk-sugar, the site of elimination of the nitrogenous bodies is still a mystery.

This form may be diagnosed clinically by placing the patient on a definite diet, as milk, the nitrogenous value of which is known, and observing the daily nitrogen output. Ten gm. urea are then given and the time required for its elimination determined, which will usually be found to extend over several days. Should a uremic attack be approaching, a decrease in the daily nitrogen output will be observed, without giving any urea.

Uremia with edema means a combination of the tubular and azotemic forms. It is especially seen in scarlet fever epidemics. The azotemic feature occurs either in the beginning of a nephritis, as in the scarlatinal variety, or it occurs late, when the uremia forms the closing chapter of a chronic nephritis.

TREATMENT

This is principally dietetic, and only the bare principles of dietetics can be mentioned here.

In tubular nephritis there is especially impaired elimination of chlorids and retention of water in the body. Administration of salt to such patients will cause edema or increase what already exists. Conversely, by withholding salt from the food it is possible to bring about the elimination of the excess salt in the body and with it the retained water. To illustrate:

The total quantity of blood in the body averages 5,000 c.c. Considering this a 0.7 per cent. solution of sodium chlorid, the physiologic salt solution, the individual will have in his tissues 35 gm. of sodium chlorid. If an excess of salt, say 20 gm., be given to a patient with tubular nephritis, he is unable to eliminate the excess, which must be retained in the body. To bring this into a 0.7 per cent. solution, the normal concentration, 3,000 c.c. additional of water are required; but such an increase in water will change the relation between the plasma and corpuscles, so that instead of being for example 2:1 as before, it will be three of plasma to one of corpuscles, a hydremia. The hydremia injures the endothelium of the blood-vessels and allows the passage out into the tissues of some of the fluid with its dissolved salts, constituting edema.

If this patient now be given a salt-free diet, he will continue to excrete a small quantity of salt in the urine, this salt coming from the edema fluid and taking with it its proportional quantity of water, so that in this way the entire edema may be got rid of. A salt-free diet does not mean the customary milk diet, which in the usual daily quantities contains from 4 to 5 gm. of salt. Fats and carbohydrates should compose the greater part of the food. Bread, containing 0.1 per cent. of salt, as compared with the usual 1 per cent., and butter, washed in ice-water, to get rid of the salt, may be given. Soups should be absolutely forbidden, because of the low nutritive value, large quantity of fluid and salt, and of the thirst occasioned.

In the azotemic form there is retention of nitrogenous bodies. The aversion to meat so often seen in these cases gives a clue to treatment. In acute cases, von Noorden's rule to feed exclusively on water and carbohydrates in the form of fruit-juices and sugar, for at least eight days, is to be recommended, with venesection, followed by infusion of dextrose solution, for the desperate cases.

Again referring to the classical milk diet, the quantities usually given contain more nitrogen than an equivalent quantity of meat (700 c.c. milk = 100 gm. beef). It is also true that the rest nitrogen of the blood reaches its highest point during the uremic attack. For these reasons the food should be reduced to the lowest possible nitrogen content and the diet consist chiefly of carbohydrates and fats. Salt and water may be taken freely, there being no tendency to edema. In chronic cases a difficulty is experienced in abstaining from nitrogenous food in that it ultimately results in wasting of the muscular tissues, the body drawing on them for the small amount of nitrogen absolutely necessary for metabolism. To avoid this danger, a minimum of 1 gm. albumin, per kilogram of body-weight may be allowed daily, preferably in the form of milk.

In vascular nephritis the symptoms depend on changes in the circulatory system. Von Noorden first taught that contracted kidney must be treated like heart disease, that whatever spared the kidney spared the heart. To lessen the irritability of the blood-vessels is the first essential of treatment and nothing accomplishes this so well as to reduce the amount of fluid given.

Once more referring to the older treatment of from 3 to 4 liters (quarts) of milk daily, so much fluid will further irritate the blood-vessels and contribute to the high tension, hypertrophy and other vascular symptoms. It is a safe rule to keep the total intake of fluid close to 1 liter per day. Carbonated waters are especially to be avoided: they push up the diaphragm and by increasing the hyperemia of the gastric mucosa, cause greater absorption of fluid from the stomach. Since the chlorid and nitrogen elimination is not disturbed, these can be given more freely than in the other forms. If the patients are accustomed to alcohol, a small quantity may be permitted with probably no harm. Tobacco must be almost, if not entirely forbidden. Full baths, either hot or cold, should be forbidden because of the changes produced in the circulation. Should edema develop in contracted kidney, it is almost certainly due to cardiac weakness and should be treated by rest in bed and digitalis, treatment of the nephritis proper being deferred until the edema disappears.

In acute vascular nephritis, the best results are obtained by stopping fluids absolutely. Such patients may be given almost any food they wish, provided no liquids are allowed.

SUMMARY

By means of these tests, in combination with the clinical features, all cases of nephritis may be classified as tubular, vascular or azotemic.

Such a classification is of value from the point of view of treatment.

Many cases will be found in which a combination of the types exists, but one type will always predominate and indicate the special line of treatment.

Treatment, to be rational, should aim to spare that part or function which is especially incapacitated. This

may be accomplished by excluding chlorids in tubular nephritis, nitrogenous food in the azotemic variety, and restricting, or excluding fluids in the vascular form.

For the ideas here expressed, I am indebted to the teachings of Dozent H. Eppinger of the First Medical Clinic, Vienna.

8122 Jenkins Arcade.

RESULTS OF SCHIÖTZ METHOD IN RIDDING DIPHTHERIA CASES AND CARRIERS OF DIPHTHERIA BACILLI IN THE STATE AGRICULTURAL AND INDUSTRIAL SCHOOL

FREDERICK L. WRIGHT, M.D., INDUSTRY, N. Y.

In the New York State Agricultural and Industrial School there are approximately 740 boys, ranging in age from 6 to 17 years. They are distributed, twenty-five boys to a colony, and sleep in dormitories. Coming in many cases from jails, detention homes, and slums of the cities in the state, the boys are frequently found to be carriers of the Klebs-Löffler bacillus. There have been a large number of cases of this disease in the institution.

By the early and bold use of the excellent and unlimited supply of antitoxin furnished us by the New York State Department of Health, I have had no difficulty in treating these cases; but the trouble has concerned their release from quarantine (that is, after two consecutive negative cultures at five-day intervals), as some of the cases remained positive for months. As soon as a case developed in a colony the patient was immediately removed therefrom, the cottage thoroughly fumigated with sulphur, the laundry immersed over night in 1:2,000 mercuric chlorid solution, and each inmate immunized by the subcutaneous administration of 1,000 units of diphtheria antitoxin. Cultures were taken from the nasal passages and throats of each inmate, and from four to ten were usually found to be carriers; in which case they were sent to the contagious hospital, the capacity of which (sixteen), was usually taxed to its utmost.

In spite of the following measures, each of which was given a conscientious trial, it was often a matter of months to obtain the two negative cultures necessary for release: spraying nasal passages and pharynx every three hours with normal saline, also gargling throat with this solution; swabbing tonsils and fauces with 10 per cent. silver nitrate solution daily; spraying nasal passages and pharynx and gargling, with one-fourth dilution of liquor antisepticus; gargling every four hours with brewer's yeast; gargling and spraying every three hours with lactic acid buttermilk.

Having read articles in various medical magazines of the successful use of a twenty-four-hour culture in plain bouillon of the *Staphylococcus pyogenes aureus* in such cases,[1] we made arrangement with Dr. C. F. Chaffe, in charge of the Monroe County laboratory, Rochester, a branch of the New York State Health Department, to supply us weekly, or oftener if necessary, with from 4 to 6 ounces of this material. We began using it as a spray in a Devilbiss atomizer, once in the nose and throat of each new inmate, and every three hours into the nose and throat of all cases and carriers.

The following results were obtained:

With the old methods: average number of cases 35; average time of isolation thirty-two days; average number of carriers 22; average time of isolation thirty-four days.

With the staphylococcus broth: average number of cases 32; average time of isolation twenty-two days; average number of carriers 34; average time of isolation, eleven days.

So many carriers were entering the school, especially during the winter, that the request was sent to magistrates committing boys to the school to send with each boy a certificate from the local health officer that the boy was free from any contagious or infectious disease, and that a culture had been taken from the boy's throat, and found to be free from diphtheria bacilli. This has been done in the majority of cases, so that for the past six months we have had only a few sporadic cases of a disease which had prior to these measures caused two epidemics.

From our experience, this method appears to be absolutely innocuous and capable of causing the early disappearance of the diphtheria bacillus.

1. Schlötz: Cure of Chronic Diphtheria Bacillus Carriers, Ugesk. f. Læger, 1909, lxxi, No. 49; abstr., THE JOURNAL A. M. A., Jan. 29, 1910, p. 422. Page, Henry: Diphtheria Bacillus Carriers, Arch. Int. Med., January, 1911, p. 16. Lorenz, W. F., and Ravenel, Mazyck P.: Treatment of Diphtheria Carriers by Overriding with Staphylococcus Aureus, THE JOURNAL A. M. A., Aug. 31, 1912, p. 690. Wiener, R. G.: New York State Jour. Med., February, 1913.

A NOTE ON THE TREATMENT OF COUGH IN ADVANCED PULMONARY TUBERCULOSIS

J. DOUGLAS BLACKWOOD, JR., M.D., PHILADELPHIA

Member of the Staff of the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis, University of Pennsylvania; Pathologist to the Kensington Tuberculosis Dispensary

As the cough in pulmonary tuberculosis is often a very distressing symptom, especially during the night hours, any remedy that will give relief to the sufferer is of value.

An intelligent patient of mine, who was suffering with advanced pulmonary tuberculosis, first called my attention to the fact that when he took acetylsalicylic acid (aspirin) in the evening, his cough was much relieved and as a result he passed a more comfortable night.

I made use of this observation in several other cases of advanced pulmonary tuberculosis, asking the patients to let me know if they received any benefit from the treatment and in every case reports were favorable.

I now frequently advise patients with advanced pulmonary tuberculosis to take acetylsalicylic acid 5 or 10 grains about 8 p. m. when they are troubled with an excessive cough at night. The smaller dose is often sufficient to control the cough and is not so liable to cause a night sweat as is the larger dose.

I do not recall ever having seen this fact mentioned in the current medical literature and I am unable to find any mention of it in the books on the subject which I have consulted. I would suggest that this remedy be given a trial before resorting to the use of opium or its derivatives, in cases in which local treatment of the nose, pharynx, larynx or postural treatment of the patient is not successful.

5346 Wayne Avenue.

A RAPID METHOD FOR RIPENING STAINS

LAWRENCE W. STRONG, M.D., NEW YORK
Pathologist, Woman's Hospital

The awkward necessity of waiting several weeks for hematoxylin stains to ripen has led me to apply a method originally described by Balch for the ripening of Wright's stain.

This consists of a freshly precipitated silver oxid which, when added to any hemalum solution or to any methylene blue solution, will polychromize it within a few minutes.

A gram of silver nitrate dissolved in 50 c.c. of distilled water is treated with a dilute solution of sodium hydroxid, little by little, until no more brown precipitate of silver oxid appears. The fluid should be shaken after each addition in order to secure good flocculation. The precipitate is then washed thoroughly until it is free from alkali. This may be tested by litmus or phenolphthalein; but ten or a dozen washings will suffice. This silver oxid is added to the hemalum or the methylene blue solution, allowed to stand for an hour or two and then filtered, when the stain is ready for use.

Unna's polychrome methylene blue may be ripened rapidly in this way. In preparing eosinate of methylene blue, as in Wright's stain, the methylene blue is first polychromized with the silver oxid for a day or two and then the eosin solution is added. This obviates the necessity of steaming the methylene blue and, what is more important, it is certain in its action, while the steaming is uncertain and sometimes fails.

90 Morningside Drive.

A SIMPLE METHOD OF APPLYING THE VON PIRQUET TEST

LOUIS SHALET, M.D., NEW YORK
Attending Physician, Tuberculosis Clinics, Department of Health

The method consists in using the flat end (about 2 mm. wide) of sterile wooden toothpicks instead of the von Pirquet borer or crisscross scratching with a needle. It is applied as follows: After cleansing the flexor surface of the forearm in the usual manner, the flat end of the sterile toothpick is dipped into the tuberculin, is next gently pressed on the desired spot on the skin, and, while held in the middle by the thumb and index finger, a few turns (two to and fro turns, or four in all, to be exact) are made by rolling the toothpick on its own axis between the fingers. The result will be a very neat round abrasion of the epithelium without the appearance of blood. The toothpick is burnt after use. The same procedure is gone through with the control abrasion, another toothpick being used, of course. It is recommended that no finger be kept on the other end of the toothpick, as its weight tends to undue pressure on the skin, with resultant pain.

The advantages of this method of application are many. It is simple. It eliminates the medicine dropper or tiny wooden spatula with which to apply the tuberculin. The test could be done in a sterile manner to a number of children in a short time, such as obtains in a busy children's clinic. It does not unduly frighten the ever-apprehensive child with the exhibition of bright metal instruments, such as the von Pirquet borer or even a needle. Lastly it is done so quickly as to be decidedly less painful to the patient.

1041 Madison Avenue.

TREATMENT OF PELLAGRA WITH LACTIC ACID BACILLI

WILLIAM LAMAR LAW, M.D., MONTGOMERY, ALA.

The last five typical cases of pellagra in my practice have been treated with Bulgarian lactic acid bacilli in tablet form, each about 7½ grains. Two tablets were given half an hour before each meal and at bedtime.

The improvement in the appearance and subjective symptoms of these patients warrants this preliminary report.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

EMETINE HYDROCHLORIDE.—Emetinae Hydrochloridum.

Emetine hydrochloride is the hydrochloride, $C_{29}H_{44}N_2O_4 \cdot 2HCl.2H_2O$, of an alkaloid found in *Cephaelis ipecacuanha*.

Emetine hydrochloride occurs as a white crystalline powder, soluble in water and alcohol. The aqueous solution of emetine hydrochloride is practically neutral toward litmus. The general alkaloidal reagents precipitate emetine, even from dilute solutions. Alkalies precipitate emetine from aqueous solutions of its salts. A freshly prepared concentrated solution of ammonium molybdate in concentrated sulphuric acid (Froehde's reagent) is colored green by emetine hydrochloride.

If about 0.10 Gm. of emetine hydrochloride be dissolved in water, the solution made alkaline with potassium hydroxide, shaken with ether till nothing more is extracted, then acidified and made alkaline with ammonia water and again extracted with ether, the second ether extraction on evaporation should leave a residue which, when treated with Froehde's reagent, should not become purple.

If emetine hydrochloride be dried to constant weight at 100°, the loss in weight should not exceed 8 per cent. of the original substance.

Actions and Uses.—Emetine acts similarly to Ipecac but is relatively more nauseant and less emetic, and causes relatively less renal irritation, but more cardiac depression. Emetine hydrochloride in the form of injections has been reported to be of especial value in amebic dysentery.

Dosage.—Expectorant, from 0.005 to 0.01 Gm. (1/12 to 1/6 grain). From 0.01 to 0.02 Gm. (1/6 to 1/3 grain) causes emesis, but cephaeline is preferred as an emetic. By hypodermic injection, 0.03 Gm. (½ grain).

Non-Proprietary Preparations:

Emetine Hydrochloride, Merck.—Manufactured by E. Merck, Darmstadt, Germany (Merck and Co., New York).

Ampuls Emetine Hydrochloride, Mulford.—Each ampul contains emetine hydrochloride 30 mg. (½ grain). Prepared by the H. K. Mulford Co., Philadelphia.

ACNE VACCINE.—(See N. N. R., 1913, p. 221.)
Greeley Laboratories, Inc., New York City.

Acne Vaccine.—It is marketed in six graduated doses, containing respectively 1, 3, 5, 8, 10 and 12 millions of bacteria killed by heat; put up in hypodermic containers.

BACILLUS COLI VACCINE.—(See N. N. R., 1913, p. 221.)
Greeley Laboratories, Inc., New York City.

Colon Vaccine.—It is marketed in six graduated doses containing respectively 25, 75, 200, 400, 650 and 1,000 millions of bacteria killed by heat; put up in hypodermic containers.

BACILLUS PYOCYANEUS VACCINE.—(See N. N. R., 1913, p. 222.)
Greeley Laboratories, Inc., New York City.

Pyocyaneus Vaccine.—It is marketed in six graduated doses containing respectively 25, 75, 200, 400, 650 and 1,000 millions of bacteria killed by heat; put up in hypodermic containers.

GONOCOCCUS VACCINE.—(See N. N. R., 1913, p. 223.)
Greeley Laboratories, Inc., New York City.

Gonococcus Vaccine.—It is marketed in six graduated doses containing respectively 10, 25, 75, 150, 300 and 500 millions of bacteria killed by heat; put up in hypodermic containers.

MENINGOCOCCUS VACCINE.—(See N. N. R., 1913, p. 223.)
Greeley Laboratories, Inc., New York City.

Meningococcus Vaccine.—It is marketed in three doses containing respectively 500, 1,000 and 1,000 millions of bacteria killed by heat; put up in hypodermic containers.

PNEUMOCOCCUS VACCINE.—(See N. N. R., 1913, p. 224.)
Greeley Laboratories, Inc., New York City.

Pneumococcus Vaccine.—It is marketed in six graduated doses containing respectively 10, 25, 75, 150, 300 and 500 millions of bacteria killed by heat; put up in hypodermic containers.

STAPHYLOCOCCUS VACCINES.—(See N. N. R., 1913, p. 225.)
Greeley Laboratories, Inc., New York City.

Staphylococcus Albus Vaccine.—It is marketed in six graduated doses containing respectively 50, 100, 200, 400, 700 and 1,000 millions of bacteria killed by heat; put up in hypodermic containers.

Staphylococcus Aureus Vaccine.—It is marketed in six graduated doses containing respectively 50, 100, 200, 400, 700 and 1,000 millions of bacteria killed by heat; put up in hypodermic containers.

STREPTOCOCCUS VACCINES.—(See N. N. R., 1913, p. 226.)
Greeley Laboratories, Inc., New York City.

Streptococcus Vaccine.—It is marketed in six graduated doses containing respectively 10, 25, 75, 150, 300 and 500 millions of bacteria killed by heat; put up in hypodermic containers.

Streptococcus Erysipelatis Vaccine.—It is marketed in three graduated doses containing respectively 10, 25 and 60 millions of bacteria killed by heat; put up in hypodermic containers.

TYPHOID VACCINE.—(See N. N. R., 1913, p. 227.)
Greeley Laboratories, Inc., New York City.

Typhoid Bacillus Vaccine.—It is marketed in three doses containing respectively 500, 1,000 and 1,000 millions of bacteria killed by heat; put up in hypodermic containers.

NEW TUBERCULIN, KOCH, BACILLI EMULSION ("B. E.").—(See N. N. R., 1913, p. 233.)
Greeley Laboratories, Inc., New York City.

Tuberculin B. E.—It is marketed in six graduated doses of from 1/1000 to 1/5000 mg. in hypodermic containers.

Minutes of the Sections

(Concluded from page 2096)

THE REGISTRATION AT MINNEAPOLIS

The total registration at the Minneapolis Session was 3,246. Below are given two summaries, one by sections and one by states.

REGISTRATION BY SECTIONS

Practice of Medicine	912
Surgery	968
Obstetrics, Gynec. and Abd. Surg.	288
Ophthalmology	220
Laryngology, Otology and Rhinology	143
Diseases of Children	103
Pharmacology and Therapeutics	32
Pathology and Physiology	78
Stomatology	33
Nervous and Mental Diseases	81
Dermatology	55
Preventive Medicine and Public Health	115
Genito-Urinary Diseases	62
Hospitals	22
Orthopedic Surgery	44
Registrations without specifying any one section	90

REGISTRATION BY STATES

Alabama	11	Nevada	4
Arizona	10	New Hampshire	3
Arkansas	12	New Jersey	22
California	43	New Mexico	5
Colorado	40	New York	108
Connecticut	5	North Carolina	3
Delaware	..	North Dakota	107
District of Columbia	19	Ohio	96
Florida	5	Oklahoma	15
Georgia	10	Oregon	12
Idaho	6	Pennsylvania	79
Illinois	320	Rhode Island	4
Indiana	85	South Carolina	3
Iowa	311	South Dakota	96
Kansas	45	Tennessee	27
Kentucky	25	Texas	33
Louisiana	17	Utah	9
Maine	4	Vermont	5
Maryland	18	Virginia	4
Massachusetts	50	Washington	13
Michigan	106	West Virginia	6
Minnesota	944	Wisconsin	268
Mississippi	3	Wyoming	4
Missouri	126	Alaska	1
Montana	26	Canada	2
Nebraska	73	Philippine Islands	1

Notice on Section Transactions

Those who desire copies of the 1913 Transactions of any of the sections, but whose names are not on the permanent subscription list, should order at once, as printing will soon commence. The editions of each of these section transactions is limited. Only enough copies are printed to supply the probable demand, and each year some persons order too late to be supplied. Each volume is a cloth-bound book containing the articles and discussions in that particular section. The price, when ordered in advance, is $1.00 a volume, payable at time of delivery.

It is to be remembered that one may give a permanent order for Transactions; and those specified are sent, from year to year, until the order is cancelled. Address orders to the American Medical Association, 535 Dearborn Avenue, Chicago.

[The following are the minutes of the sections which were not published last week.]

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

TUESDAY, JUNE 17—AFTERNOON

The Chairman, Dr. Robert Levy of Denver called the meeting to order.

Dr. Levy then read the Chairman's address, entitled "The Dignity of Otolaryngology." No discussion.

Dr. G. Sluder, St. Louis, read a paper on "The Etiology, Diagnosis, Prognosis and Treatment of Sphenopalatine Ganglion Neuralgia." Discussed by Drs. H. W. Loeb, St. Louis; Corydon G. Dwight, Madison, Wis., and G. Sluder, St. Louis.

Dr. Voorhees presented a paper on "Conservative Surgery of the Nasal Septem, with Description of a 'Limited' Submucous Operation," which was read by the Secretary.

Dr. George W. MacKenzie, Philadelphia, read a paper on "Difficulties and Complications That May Arise During or After the Submucous Resection of the Septum."

These two papers were discussed by Drs. C. F. Welty, San Francisco; R. Bishop Canfield, Ann Arbor, Mich.; W. E. Casselberry, Chicago; Henry Bassett Lemere, Omaha; William L. Ballenger, Chicago; H. W. Loeb, St. Louis; Emil Mayer, New York; George Paul Marguis, Chicago; Corydon G. Dwight, Madison, Wis.; J. Holinger, Chicago; S. R. Boyce, Madison, Wis.; Francis Endeson, Boston; Samuel G. Higgins, Milwaukee, Wis.; Howard F. Pyfer, Norristown, Pa.; J. C. Beck, Chicago; James J. Pattee, Pueblo, Colo.; G. Sluder, St. Louis; C. Lester Hall, Kansas City, Mo.; J. A. Stucky, Lexington, Ky.; Margaret L. Noyes, Boston; Parsons, Grand Forks, N. Dak.; Emil Mayer, New York; C. W. Wilkowske, Chippewa Falls, Wis., and George W. MacKenzie, Philadelphia.

WEDNESDAY, JUNE 18—MORNING

The Chairman, Dr. Robert Levy, Denver, called the attention of the Section to the death of Dr. E. L. Shurly, Detroit, who was chairman of the first meeting he ever attended. He said that it was entirely fitting that a committee be appointed to draft resolutions which should be spread on the records of the Section. He thought that it would be a good precedent to establish a permanent committee which should have for its object keeping track of the members. Theirs was a very large Section to-day. He advised having a standing committee which should report at subsequent meetings the deaths of members and which should give some expression which should go on their records and in their Transactions. He also called attention to the death of Dr. Patrick F. Gildea of Colorado Springs, Colo. To report on the death of Dr. E. L. Shurly he appointed Dr. Emil Mayer, New York, and Dr. W. E. Casselberry, Chicago. To report on the death of Dr. Gildea he appointed Dr. F. L. Dennis, Colorado Springs, Colo., and Dr. C. F. Welty, San Francisco.

Dr. Burt R. Shurly, Detroit, read the following letter from Dr. Thomas J. Harris, New York, Secretary of the American Laryngological, Rhinological and Otological Society.

I beg herewith to transmit to you a copy of the report of our Special Committee on the Teaching of Otolaryngology to Postgraduates, together with the resolutions regarding the same as adopted at our May meeting in Washington by the American Laryngological, Rhinological and Otological Society. In accordance with the said resolution we have appointed Dr. D. J. Gibb Wishart of Toronto, Dr. Charles W. Richardson of Washington, and Dr. S. MacCuen Smith of Philadelphia, to represent this society, and trust that you will lay this communication before your Council at the earliest moment, so that if possible speedy action may be taken, and the larger committee be set to work this fall.

Dr. Emil Mayer, New York, read a paper on "Chronic Laryngitis."

Dr. J. C. Beck, Chicago, read a paper on "Diagnosis and Treatment of Syphilitic Laryngitis."

Dr. F. L. Dennis, Colorado Springs, Colo., read a paper on "Diagnosis and Treatment of Laryngeal Tuberculosis."

Dr. E. Fletcher Ingals, Chicago, presented a paper on "Diagnosis and Treatment of Paralysis of the Larynx," which was read by the Secretary.

Dr. Chevalier Jackson, Pittsburgh, Pa., read a paper on "The Differential Diagnosis and Treatment of Malignant Diseases of the Larynx."

These five papers were discussed by Drs. Thomas Hubbard, Toledo, Ohio; L. S. Peters, Silver City, N. Mex.; Michael P. Schuster, El Paso, Tex.; Howard F. Pyfer, Norristown, Pa.; C. F. Welty, San Francisco; J. Holinger, Chicago; Burt R. Shurley, Detroit; Elmer L. Kenyon, Chicago; Robert Levy, Denver; Emil Mayer, New York; J. C. Beck, Chicago, and F. L. Dennis, Colorado Springs, Colo.

Dr. A. M. Corwin, Chicago, read a paper on "Tonsillectomy by the Sluder Method." No discussion.

Dr. Emil Mayer, New York, presented the following report of the committee which was appointed to draw suitable resolutions on the death of Dr. E. L. Shurly:

In the death of Dr. E. L. Shurly of Detroit, this Section has lost one of its most consistent and stanch supporters. Those who had the honor of knowing him personally learned to love him for his many sterling traits. He was of most cheery disposition, always smilingly gracious, gentle and kind, a friend of the younger man, and a true type of a scientific physician, as his many valuable treatises and his text-book abundantly testify. He was devoted to his profession, and a great part of his life being given to the prevention of disease showed his great love for mankind. We shall miss our dear friend from our gatherings, but we trust that the inspiration of his manifold virtues and his life will be a stimulus to all of us.

This was signed by Dr. William E. Casselberry, Chicago, and Dr. Emil Mayer, New York.

WEDNESDAY, JUNE 18—AFTERNOON

Dr. C. D. Camp, Ann Arbor, Mich., read a paper on "Neurology in Relation to Diseases of the Nose, Throat and Ear."

Dr. W. R. Parker, Detroit, read a paper on "Ophthalmology in Relation to Diseases of the Nose, Throat and Ear."

These two papers were discussed by Drs. J. Holinger, Chicago; R. Bishop Canfield, Ann Arbor, Mich.; George E. Shambaugh, Chicago; Corydon G. Dwight, Madison, Wis.; H. W. Loeb, St. Louis; F. P. Emerson, Boston; C. F. Welty, San Francisco; George L. Richards, Fall River, Mass.; J. C. Beck, Chicago; William L. Ballenger, Chicago; Howard F. Pyfer, Norristown, Pa.; Henry Bassett Lemere, Omaha; G. Sluder, St. Louis; C. D. Camp, Ann Arbor, Mich., and W. R. Parker, Detroit.

The following were appointed on the Executive Committee: Drs. Chevalier Jackson, Pittsburgh, Pa.; H. W. Loeb, St. Louis, and George E. Shambaugh, Chicago.

THURSDAY, JUNE 19—MORNING

The following officers were elected: Chairman, Dr. Burt R. Shurly, Detroit; Vice-Chairman, Dr. L. W. Dean, Iowa City, Iowa; Secretary, Dr. F. P. Emerson, Boston; Delegate, Dr. Chevalier Jackson, Pittsburgh, Pa.; Alternate, Dr. George L. Richards, Fall River, Mass.; the following constitute the Executive Committee: Drs. Dunbar Roy, Atlanta, Ga.; G. E. Shambaugh, Chicago, and Robert Levy, Denver.

It was moved, seconded and carried that the Secretary be elected to serve a term of three consecutive years.

The adoption of the following report was seconded and carried:

This Section and the medical profession in general have, in the recent death of Dr. P. F. Gilden, suffered the loss of a man of the sunniest disposition and the most optimistic outlook on life. Dr. Gilden was born on Feb. 15, 1865, in Worcester, Mass., and lived the best part of his professional life in Colorado Springs, where he was very much beloved, not only by his professional brethren but also by his many patients and hosts of friends. This Section mourns his untimely end and extends its heartfelt sympathy to his wife and family in their sad bereavement. Drs. Frank L. Dennis and C. F. Welty, committee.

It was moved, seconded and carried that the Chair appoint a committee of three who should keep the Section informed of any of its members who died. The Chairman said he would make these appointments later.

The Committee which was appointed to consider the education of specialists in laryngology, and which was to act with similar committees from other bodies interested in laryngology, desired to report at the next annual meeting. This was consented to.

Dr. Louis D. Green, San Francisco, presented a tonsil-snare and pillar knife.

Dr. J. C. Beck, Chicago, presented an anesthetic cage-mask adapted to the ear as an aid in surgical dressings.

Dr. R. E. Mercer, Detroit, presented an electric laryngoscope.

Dr. G. E. Shambaugh, Chicago, read a paper on "Chronic Obstructive Middle-Ear Deafness." Discussed by Drs. J. Holinger, Chicago; C. F. Welty, San Francisco; J. N. MacKenzie, Baltimore; George L. Richards, Fall River, Mass.; J. C. Beck, Chicago; Corydon G. Dwight, Madison, Wis., and G. E. Shambaugh, Chicago.

Dr. F. P. Emerson, Boston, read a paper on "Temperosphenoidal Abscess with General Meningeal Symptoms. Drainage Through the Cisterna Magna. Mastoid Operation. Recovery." Discussed by Drs. J. C. Beck, Chicago; G. E. Shambaugh, Chicago; J. N. MacKenzie, Baltimore; J. Holinger, Chicago; William L. Ballenger, Chicago; Burt R. Shurly, Detroit, and F. P. Emerson, Boston.

Dr. C. F. Welty, San Francisco, read a paper on "Statistical Report of Hearing Following the Radical Mastoid Operation. Tampon vs. Skin-Graft." Discussed by Drs. William L. Ballenger, Chicago; J. Holinger, Chicago; J. C. Beck, Chicago, and C. F. Welty, San Francisco.

Dr. Walter A. Wells, Washington, D. C., read a paper on "Methods of Measuring Auditory Acuity." Discussed by Drs. G. E. Shambaugh, Chicago, and Walter A. Wells, Washington, D. C.

Dr. George L. Richards, Fall River, Mass., read a paper on "Technic of Tonsillectomy."

Dr. B. R. Sheedy, New York, presented a paper on "The Results of Tonsillectomy under Local Anesthesia," which was read by Dr. Howard F. Pyfer, Norristown, Pa.

These two papers were discussed by Drs. W. H. Loeb, St. Louis; Howard F. Pyfer, Norristown, Pa.; William L. Ballenger, Chicago; Oscar Wilkinson, Washington, D. C.; John O. McReynolds, Dallas, Tex.; (?) Parsons, St. Paul, Minn.; Charles Franklin Adams, Trenton, N. J.; C. Armin Gundelach, St. Louis; C. F. Welty, San Francisco; G. Sluder, St. Louis; George L. Richards, Fall River, Mass., and A. M. Corwin, Chicago.

SECTION ON DISEASES OF CHILDREN

TUESDAY, JUNE 17—AFTERNOON

The meeting was called to order by the Chairman, Dr. Henry Dwight Chapin, New York, at 2:20 p. m.

Dr. Chapin read the Chairman's address, entitled "Radiographic Studies of the Intestines in Infants."

Dr. John Lovett Morse, Boston, Mass., read a paper entitled "The Use of the Roentgen Ray in the Diagnosis of Obscure Abdominal Conditions in Infants and Children."

Dr. L. R. DeBuys, New Orleans, read a paper entitled "The Use of the Roentgen Ray in Pylorie Obstruction."

These papers were discussed by Drs. Abraham Jacobi, New York; G. R. Pisek, New York; Rufus Cole, New York; A. W. Crane, Kalamazoo, Mich.; Henry Helmholz, Chicago; H. Lowenburg, Philadelphia; John Lovett Morse, Boston; L. R. De Buys, New Orleans, and Henry D. Chapin, New York.

Dr. A. L. Goodman, New York, read a paper entitled "Rupture of Mediastinal Lymph-Node into Bronchus." Discussed by Drs. Willy Meyer, New York; I. A. Abt, Chicago; A. W. Myers, Milwaukee, Wis.; C. F. Wahrer, Fort Madison, Iowa, and A. L. Goodman, New York.

Dr. Frank Spooner Churchill, Chicago, read a paper entitled "Report of a Case of Staphylococcus Meningitis in a Child." Discussed by Drs. H. M. McClanahan, Omaha; H. Lowenburg, Philadelphia; F. P. Gengenbach, Denver, and Frank S. Churchill, Chicago.

WEDNESDAY, JUNE 18—MORNING

The first paper was by Dr. Thomas C. McCleave, Berkeley, Cal., entitled "Acute Acid Intoxication in Children." Discussed by Drs. John Zahorsky, St. Louis; J. R. Snyder, Birmingham, Ala.; C. H. Johnston, Grand Rapids, Mich.; Granville D. Ryan, Des Moines, Iowa; Thomas B. Cooley, Detroit; I. A. Abt, Chicago; J. L. Morse, Boston; H. T. Price, Pittsburgh, Pa.; L. R. DeBuys, New Orleans; H. Lowenburg, Philadelphia, and T. C. McCleave, Berkeley, Cal.

Dr. Victor C. Vaughan, Ann Arbor, Mich., read a paper entitled "The Protein Poison and Its Relation to Disease." Discussed by Drs. John Zahorsky, St. Louis; Mary Strong, Omaha; C. H. Johnson, Grand Rapids; C. G. Grulee, Chicago; Louis Burckhardt, Indianapolis; C. F. Wahrer, Fort Madison, Iowa; H. W. Cheney, Chicago; George S. Cattermole, Boulder, Colo.; T. C. McCleave, Berkeley, Cal., and Victor C. Vaughan, Ann Arbor, Mich.

Dr. Clifford G. Grulee, Chicago, read a paper entitled "The Nature of Ileocolitis from an Etiologic Standpoint." Discussed

by Drs. R. M. Smith, Boston; E. W. Mitchell, Cincinnati; J. L. Morse, Boston, and Clifford G. Grulee, Chicago.

Dr. I. A. Abt, Chicago, read a paper entitled "Nutritional Injuries Produced by Starch." Discussed by Drs. John Zahorsky, St. Louis; E. P. Gengenbach, Denver; F. W. Schultz, Minneapolis; Julius Hess, Chicago; L. D. Buckley, New York, and I. A. Abt, Chicago.

Wednesday, June 18—Afternoon

Dr. Walter L. Bierring, Des Moines, Iowa, read a paper by himself and Drs. V. L. Glomset and J. A. Goodrich, Des Moines, Iowa. Discussed by Drs. C. G. Grulee, Chicago; C. F. Wahrer, Fort Madison, Iowa; Mary Strong, Omaha; John Zahorsky, St. Louis, and W. L. Bierring, Des Moines, Iowa.

Dr. Thomas B. Cooley, Detroit, read a paper entitled "The Treatment of Hemorrhagic Conditions in Infancy and Childhood." Discussed by Drs. V. D. Lespinasse, Chicago; H. M. McClanahan, Omaha; Julius Hess, Chicago; Ogden M. Edwards, Pittsburgh; H. Lowenburg, Philadelphia; C. Brooks, Pittsburgh, Pa., and T. B. Cooley, Detroit.

Dr. Arthur E. Hertzler, Kansas City, Mo., read a paper entitled "Treatment of Inguinal Hernia in Children." Discussed by Dr. C. G. Buford, Chicago.

Dr. William Cavan Woolsey, Brooklyn, read a paper entitled "General Anesthesia in the Surgery of Childhood." No discussion.

Dr. Julius Parker Sedgwick, Minneapolis, read a paper entitled "Spasmophilia with Especial Reference to Familial Reactions and Repeated Absences." Discussed by Drs. A. C. Rogers, Faribault, Minn.; Mary Strong, Omaha, and John Zahorsky, St. Louis.

Dr. A. C. Rogers, Faribault, Minn., read a paper entitled "Desirability of Early Diagnosis of Mental Deficiency." Discussed by Drs. Mary Strong, Omaha; C. F. Wahrer, Fort Madison, Iowa, and A. C. Rogers, Faribault, Minn.

Thursday, June 19—Morning

The following officers were elected: Chairman, Dr. F. S. Churchill, Chicago; Vice-Chairman, Dr. L. R. DeBuys, New Orleans; Secretary, Dr. F. P. Gengenbach, Denver; Delegate, Dr. J. P. Sedgwick, Minneapolis.

Dr. Richard M. Smith, Boston, read a paper entitled "Vulvovaginitis in Children." Discussed by Drs. F. C. Neff, Kansas City, Mo.; H. M. McClanahan, Omaha; H. Lowenburg, Philadelphia; D. L. Richardson, Providence, R. I.; J. L. Hess, Chicago; C. F. Wahrer, Fort Madison, Iowa; John Zahorsky, St. Louis; H. D. Chapin, New York, and R. M. Smith, Boston.

Dr. John Zahorsky, St. Louis, read a paper entitled "Roseola Infantum." Discussed by Drs. F. P. Gengenbach, Denver; H. W. Cheney, Chicago, and John Zahorsky, St. Louis.

Dr. A. Sophian, Kansas City, Mo., read a paper entitled "Atypical Forms of Meningitis (Posterior Basic Meningitis; Aseptic Meningitis)." Discussed by Drs. J. L. Morse, Boston, and A. Sophian, Kansas City, Mo.

Dr. Julius H. Hess, Chicago, read a paper entitled "Leukocyte Counts in Epidemic Meningitis and Pneumonia." No discussion.

Dr. F. P. Gengenbach, Denver, read a paper entitled "Precocious Menstruation." No discussion.

Dr. H. M. McClanahan, Omaha, read a paper entitled "Clinical Report and Post-Mortem Findings in the Case of a Child with a Congenital Heart Disease, Dying from Acute Nephritis." Discussed by Drs. John Zahorsky, St. Louis; C. F. Wahrer, Fort Madison, Iowa; H. Lowenburg, Philadelphia, and H. M. McClanahan, Omaha.

Thursday, June 19—Afternoon

Dr. D. L. Richardson, Providence, R. I., read a paper entitled "The Hospital Management of Contagious Diseases." Discussed by Dr. H. E. Roberts, Minneapolis.

Miss Julia C. Lathrop, Washington, D. C., read a paper entitled "Federal Children's Bureau; the Law, the Organization, the Scope of Its Present Work." Discussed by Drs. C. F. Wahrer, Fort Madison, Iowa, and H. D. Chapin, New York.

Dr. H. Lowenburg, Philadelphia, read a paper entitled "The Etiology of Artificial Feeding; a Plea for the Study of Breast Milk Problems." Discussed by Drs. Rosenthal Edmondson, Grand Rapids, Mich.; John Zahorsky, St. Louis; C. F. Wahrer, Fort Madison, Iowa; C. F. Chapin, New York; H. W. Bancroft, Bancroft, Neb.; L. R. DeBuys, New Orleans; C. H. Johnson, Grand Rrapids, Mich.; A. C. Rogers, Faribault, Minn., and F. P. Gengenbach, Denver.

Friday, June 20—Morning

A joint meeting was held with the American Association of Medical Milk Commissions.

Meeting called to order by Dr. Ogden M. Edwards, Pittsburgh, Pa., President Association of Medical Milk Commission.

Dr. Otto Geier, Cincinnati, read a paper entitled "Report of the Milk Commission on the Relation of Bovine and Human Tuberculosis." No discussion.

Dr. T. C. McCleave, Berkeley, Cal., read a paper entitled "Certified Milk." Discussed by Drs. J. W. Van Derslice, Chicago; H. L. Coit, Newark, N. J.; John Zahorsky, St. Louis; C. H. Johnston, Grand Rapids, Mich.; T. C. McCleave, Berkeley, Cal.; Ogden M. Edwards, Pittsburgh, Pa.; Otto Geier, Cincinnati, and J. W. Van Derslice, Chicago; Messrs. Stephen Francisco, Newark, N. J., and W. E. Miller, Cincinnati.

Dr. Henry L. Coit, Newark, N. J., read a paper entitled, "The Efficiency of the Milk Commission, Graphically Illustrated." No discussion.

Dr. H. H. Harding, Urbana, Ill., read a paper entitled "The Effect of Barn Operations on the Germ Content of Milk." Discussed by Drs. C. H. Johnston, Grand Rapids, Mich.; T. C. McCleave, Berkeley, Cal.; John Zahorsky, St. Louis; J. W. Van Derslice, Chicago; Otto Geier, Cincinnati; H. A. Harding, Urbana, Ill.; H. L. Coit, Newark, N. J., and Professor Dowling, President Louisiana State Board of Health.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

Tuesday, June 17—Afternoon

The Chairman, Dr. Ray L. Wilbur, San Francisco, called the meeting to order in Millard Hall, New Campus, University of Minnesota, at 2:09 p. m.

Mr. M. I. Wilbert, Washington, D. C., read the following communication:

> I have the honor to notify you that the following delegates to represent the American Pharmaceutical Association, at your meeting at Minneapolis, June 17-20, 1913, have been appointed: J. P. Remington, Chairman, Philadelphia; H. M. Whelpley, St. Louis; J. H. Beal, Scio, O.; H. H. Rusby, Newark, N. J.; Bernard Fantus, Chicago; L. F. Kebler, Washington, D. C.; G. M. Beringer, Camden, N. J.; Otto Raubenheimer, Brooklyn; Theo. J. Bradley, Boston; F. J. Wulling, Minneapolis.
>
> The delegates have been twice notified of their appointment and of the date of the meeting. Very truly yours, J. H. Beal, Secretary.

A motion was made and carried to extend the privileges of the floor to the members of the delegation from the American Pharmaceutical Association.

Dr. Wilbur then read the Chairman's address, "The Teaching of Therapeutics."

Dr. Torald Sollmann, Cleveland, read a paper entitled, "Yesterday, To-day and To-morrow: The Activities of the Council on Pharmacy and Chemistry." Discussed by Drs. F. E. Stewart, Philadelphia; B. Fantus, Chicago; F. J. Wulling, Minneapolis; Alexander S. von Mansfelde, Ashland, Neb.; Ralph St. J. Perry, Farmington, Minn.

Dr. Joseph P. Remington, Philadelphia, presented the address of the delegation from the American Pharmaceutical Association as follows:

"The American Pharmaceutical Association sends greetings to the American Medical Association and best wishes for a most successful meeting at Minneapolis. During the last three years the national organizations have been more closely brought together through Pharmacopeial revision, members from both organizations working in their several departments on the Ninth Revision.

"It was to be expected that differences of opinion would arise, and it is gratifying to know that during the three years of earnest discussion and official correspondence, personalities have been conspicuous through their absence. The principal debates have been on the question of scope, some of

the medical members arguing for a more restricted list; others desire an extended list, but the majority of the members of the Revision Committee are undoubtedly in favor of adopting neither a restricted nor extended list but one which they believe will be satisfactory to the largest number of practitioners in America. It will be interesting to know that about 85 per cent. of the manuscript of the Ninth Revision is nearly finished and the work of getting it ready for the press will soon begin.

"The American Pharmaceutical Association has been very active through its branch organizations, and its own legislative committees in advancing legislation tending to control the extensive use of narcotics and in preventing as far as possible the further development of evil practices of unworthy members of both professions. It is sincerely hoped that our national bodies will continue to work in the future on lines which will draw both together and, ignoring small and unimportant details and differences, will stand shoulder to shoulder in advancing legislation which shall secure to suffering humanity the greatest uplift that is possible."

A motion was made by Dr. Torald Sollmann, Cleveland, that the Section request the House of Delegates of the American Medical Association to urge on the Committee of Revision of the Pharmacopeia of the United States that the selection of articles to be included be left to the Committee on Scope, in which the medical profession has a majority representation, rather than to the Executive Committee which represents mainly the pharmaceutical profession, and which has overridden half the changes advocated by the Commmittee on Scope." [The House concurred.]

Prof. W. A. Puckner, Chicago, read a paper on "The Quality of Drugs Sold to Dispensing Physicians." Discussed by Drs. B. Fantus, Chicago; Ralph St. J. Perry, Farmington, Minn.; Alexander S. von Mansfelde, Ashland, Neb.; F. J. Wulling, Minneapolis, and Prof. W. A. Puckner, Chicago.

A motion was made by Dr. B. Fantus, Chicago, that the American Medical Association advise its members against dispensing, excepting in cases of emergency or when the services of a properly qualified pharmacist are not available. This motion was not passed.

Mr. M. I. Wilbert, Washington, D. C., read a paper entitled, "Carelessness in the Pharmacy as a Reason for a Restricted Materia Medica." Discussed by Drs. Alexander S. von Mansfelde, Ashland, Neb.; J. P. Remington, Philadelphia; F. J. Wulling, Minneapolis; Torald Sollmann, Cleveland; A. J. Carlson, Chicago; Reid Hunt, Washington, D. C., and Prof. W. A. Puckner, Chicago.

A motion was made by Mr. M. I. Wilbert, Washington, D. C., and after discussion, was passed, that the Section on Pharmacology and Therapeutics requests the House of Delegates of the American Medical Association to bring to the attention of the proper federal and state authorities the fact that greater activity is needed in the enforcement of existing laws relating to drugs and medicines, and urge on them the need for more energetic and effective action in this direction. [The House concurred.]

Prof. John A. Handy, Minneapolis, read a paper entitled, "The Fundamental Principles of Biochemistry; Their Application in the Study of Colloidal Minerals and Mineral Salts in True Organic Form and Their Use in Medicine." Discussed by Drs. Alexander S. von Mansfelde, Ashland, Neb.; F. E. Stewart, Philadelphia, and Prof. John A. Handy, Minneapolis.

Mr. A. J. Carlson, Chicago, read a paper on "The Solubility of White Leads in Human Gastric Juice and Its Bearing on the Hygiene of the Lead Industries." Discussed by Dr. E. D. Brown, Minneapolis; Mr. M. I. Wilbert, Washington, D. C.; Drs. Alexander S. von Mansfelde, Ashland, Neb., and A. J. Carlson, Chicago.

WEDNESDAY, JUNE 18—MORNING

Dr. A. C. Crawford, Palo Alto, Cal., "The Physiologic Testing of Ergot" (read by Dr. E. D. Brown, Minneapolis). No discussion.

Dr. Frank Billings, Chicago, read a paper entitled, "Internal Hemorrhages: Can We Control Them?" Discussed by Drs. Alexander S. von Mansfelde, Ashland, Neb.; L. A. Levison, Toledo, Ohio; H. L. Staples, Toledo, Ohio; Ray L. Wilbur, San Francisco, and Dr. Frank Billings, Chicago.

Dr. A. D. Hirschfelder, Baltimore, read a paper entitled, "Diuretics in Cardiovascular Disease." Discussed by Drs. Philip S. Roy, Washington, D. C.; B. Fantus, Chicago; Frank Billings, Chicago; Robert A. Hatcher, New York, and A. D Hirschfelder, Baltimore.

Dr. Henry A. Christian, Boston, read a paper entitled, "The Value of Diuretic Drugs in Acute Experimental Nephritis." Discussed by Drs. A. D. Hirschfelder, Baltimore, and Henry A Christian, Boston.

Dr. Charles Lyman Greene, Minneapolis, read a paper entitled, "Treatment of Anginal Pains." Discussed by Drs Frank Billings, Chicago; A. D. Hirschfelder, Baltimore; Philip S. Roy, Washington, D. C.; W. H. Witt, Nashville, Tenn.; B Fantus, Chicago; L. F. Ross, Richmond, Ind.; Ray L. Wilbur San Francisco, and Charles Lyman Greene, Minneapolis.

Drs. Kennon Dunham and Charles S. Rockhill, Cincinnati presented a paper entitled, "Therapeutic Pneumothorax as a Palliative Measure: A Report of Twenty Cases from the Cincinnati Tuberculosis Hospital." Disscussed by Drs. Charles L. Minor, Asheville, N. C.; C. K. Boys, Wei-hsien, China, and Kennon Dunham, Cincinnati.

WEDNESDAY, JUNE 18—AFTERNOON

A joint meeting was held with the Section on Practice of Medicine. For the papers read, which constituted a Symposium on Serums and Vaccines, see the minutes of that Section

THURSDAY, JUNE 19—MORNING

The following officers were elected: Chairman, Dr. J. F. Anderson, Washington, D. C.; Vice-Chairman, Dr. R. A. Hatcher, New York; Secretary, Mr. M. I. Wilbert, Washington, D. C.; Delegate, Dr. Ray L. Wilbur, San Francisco, and Altenate, Dr. Reid Hunt, Washington, D. C., thus making the Executive Committee consist of Drs. Lawrence Litchfield, Pittsburgh; Torald Sollmann, Cleveland, and Ray L. Wilbur, San Francisco.

Dr. N. S. Davis, Chicago, read a paper on "Non-Surgical Treatment of Cirrhosis of the Liver." Discussed by Drs. E. D. Brown, Minneapolis; A. S. von Mansfelde, Ashland, Neb.; Ray L. Wilbur, San Francisco, and N. S. Davis, Chicago.

Dr. Joseph A. Capps, Chicago, read a paper entitled, "Venous Blood-Pressure as Influenced by the Drugs Employed in Cardiovascular Therapy." Discussed by Drs. Joseph L. Miller, Chicago, Clyde Brooks, Pittsburgh; Torald Sollmann, Cleveland; A. S. von Mansfelde, Ashland, Neb., and Joseph A. Capps, Chicago.

Dr. Robert A. Hatcher, New York, read a paper entitled, "The Elimination of the Digitalis Bodies." Discussed by Drs. Torald Sollmann, Cleveland; E. D. Brown, Minneapolis, and R. A. Hatcher, New York.

Dr. Cary Eggleston, New York, sent a paper entitled, "Clinical Observations on the Emetic Action of Digitalis," which was read by Dr. R. A. Hatcher, New York. Discussed by Drs. Clyde Brooks, Pittsburgh, and R. A. Hatcher, New York.

Dr. B. F. McGrath of the Mayo Clinic, Rochester, Minn., read a paper entitled, "Various Methods of Administering Ether. Experimental Observations." Discussed by Drs. Torald Sollmann, Cleveland; A. S. von Mansfelde, Ashland, Neb.; Clyde Brooks, Pittsburgh, and B. F. McGrath, Rochester, Minn.

Drs. Charles W. Greene and Theophile T. Kruse, Columbia, Mo., presented a paper entitled, "The Bromid Question Experimentally Considered." No discussion.

THURSDAY, JUNE 19—AFTERNOON

The following papers were read as a Symposium on Physical Therapeutics and discussed separately:

Dr. Curran Pope, Louisville, Ky., read a paper on "Hydrotherapy in Nervous Fatigue." Discussed by Drs. G. Betton Massey, Philadelphia, and Curran Pope, Louisville, Ky.

Dr. H. M. Hallock, Hot Springs, Ark., had prepared a paper entitled, "Some Aspects of Hydrotherapy in the United States," which was read by Dr. Ray L. Wilbur, San Francisco, owing

to the death of Dr. Hallock on May 19, 1913. Discussed by Drs. Ray L. Wilbur, San Francisco; Mr. M. I. Wilbert, Washington, D. C.; W. H. Witt, Nashville, Tenn.; C. F. Menninger, Topeka, Kan., and Kennon Dunham, Cincinnati.

Dr. L. G. Rowntree, Baltimore, presented a paper entitled, "Radium in Internal Medicine," which was read by Dr. Frank Hinman, Baltimore. Discussed by Drs. Ray L. Wilbur, San Francisco; R. Robinson, Danielson, Conn.; G. E. Pfahler, Philadelphia; William H. Mercur, Pittsburgh, Pa.; Charles Stewart, Salt Lake City, and W. H. Witt, Nashville, Tenn.

The following papers were read as a Symposium on Roentgen-Ray Therapy:

Dr. Sidney Lange, Cincinnati, read a paper on "Rational Roentgenotherapy by Measured Doses."

Dr. E. D. Brown, Minneapolis, took the chair at this juncture and acted as Chairman until the meeting adjourned.

Dr. W. A. Pusey, Chicago, read a paper entitled, "What Can Be Done in Cancer with Roentgen Rays?"

Dr. G. E. Pfahler, Philadelphia, read a paper entitled, "The Healing Process of Osteosarcoma under the Influence of the X-Rays." Discussed by Drs. L. T. Le Wald, New York; G. Betton Massey, Philadelphia; Kennon Dunham, Cincinnati; J. M. King, Nashville, Tenn.; A. M. Cole, Indianapolis, Ind; W. A. Pusey, Chicago; G. E. Pfahler, Philadelphia, and Sidney Lange, Cincinnati.

SECTION ON PATHOLOGY AND PHYSIOLOGY

TUESDAY, JUNE 17—AFTERNOON

The meeting was called to order by the Chairman, Dr. A. W. Hewlett, Ann Arbor, Mich., at 2:10 p. m.

The Secretary, Dr. William Ophüls, San Francisco, not being present, Dr. H. E. Robertson, Minneapolis, was made Temporary Secretary.

Dr. A. W. Hewlett, Ann Arbor, Mich., read the Chairman's address, entitled "Pathologic Physiology in Relation to Internal Medicine." No discussion.

The following papers were read as a Symposium on Diplococcus and Streptococcus Infections:

Dr. J. A. Capps, Chicago: "Epidemics of Streptococcus Sore Throat. A Consideration of Their Clinical Features and Their Etiology."

Dr. D. J. Davis, Chicago: "The Relation of Streptococci to Arthritis."

Dr. E. C. Rosenow, Chicago: "Studies on Rheumatism, Articular and Muscular."

Drs. A. R. Dochez and L. P. Gillespie, New York: "A Biologic Classification of Pneumococci by Means of Immunity Reactions and the Relation of Certain Varieties to the Clinical Course of Lobar Pneumonia in Man."

These four papers were discussed by Drs. Frank Billings, Chicago; G. L. Richards, Fall River, Mass.; Henry Albert, Iowa City, Iowa; Rufus Cole, New York; E. T. Bell, Minneapolis; Norman Bridge, Los Angeles; Hubert Jermain, Milwaukee, Wis.; J. A. Capps, Chicago; D. J. Davis, Chicago, and E. C. Rosenow, Chicago.

WEDNESDAY, JUNE 18—MORNING

Mr. A. J. Carlson, Chicago, read a paper on "Some New Observations on the Physiology of the Stomach in Man and in Dogs."

It was moved by Dr. W. B. Cannon, Boston, that Mr. Carlson be given the fifteen minutes allowed for the reading of a paper on "Movements of the Empty Stomach in Dogs during the Course of Pancreatic Diabetes" by Dr. A. B. Luckhardt, Chicago, in the absence of Dr. Luckhardt, Mr. Carlson to finish his own paper and give a summary of Dr. Luckhardt's paper at the end. This motion was seconded and carried.

These two papers were discussed by Dr. W. B. Cannon, Boston, and Mr. A. J. Carlson, Chicago.

Drs. Charles W. Greene and W. F. Skaer, Columbia, Mo., read a paper on "Evidences of Fat Absorption by the Mucosa of the Mammalian Stomach." Discussed by Mr. A. J. Carlson, Chicago, and Drs. E. T. Bell, Minneapolis, and Charles W. Greene, Columbia, Mo.

Dr. Lewis Gregory Cole, New York, read a paper on "The Physiology of the Pylorus, Pilleus Ventriculi and Duodenum, as Observed Radiographically." Discussed by Drs. W. B. Cannon, Boston; A. J. Carlson, Chicago; J. T. Case, Battle Creek, Mich.; E. W. Caldwell, New York; F. W. Pottenger, Los Angeles, and Lewis Gregory Cole, New York.

Drs. Frederic S. Lee, New York, and A. E. Guenther, Lincoln, Neb., read a paper on "Some Physiologic Properties of Diaphragm Muscle." Discussed by Mr. A. J. Carlson, Chicago; Drs. C. Brooks, Pittsburgh, and A. E. Guenther, Lincoln, Neb.

Dr. J. H. Agnew, Ann Arbor, Mich., read a paper on "Comparative Study of Some Functional Renal Tests." Discussed by Dr. A. W. Hewlett, Ann Arbor, Mich.

Dr. H. B. Schmidt, Ann Arbor, Mich., read a paper on "A Clinical Study of Hypercholesteremia." No discussion.

WEDNESDAY, JUNE 18—AFTERNOON

Dr. G. Wilse Robinson, Kansas City, Mo., read a paper on "Overresponse to Affective Stimuli from Stationary Cortical Lesions. Report of a Case." No discussion.

Dr. D. H. Dolley, Columbia, Mo., read a paper on "The Relation between Functional Activity and Depression in Nerve Cells from Anatomic Analysis." No discussion.

Dr. W. P. Larson, Minneapolis, read a paper on "Report of a Case in which the Bacillus Fusiformis was Isolated from the Blood." Discussed by Drs. H. E. Robertson, Minneapolis, and W. P. Larson, Minneapolis.

Dr. Lorena M. Breed, Pomona, Cal., read a paper on "Further Observations with a Saccharomycete." Discussed by Drs. A. L. Grover, Iowa City, Iowa, and Lorena M. Breed, Pomona, Cal.

Dr. Hewlett appointed Drs. H. Gideon Wells, Chicago; W. B. Cannon, Boston, and F. H. Scott, Minneapolis, as members of the Nominating Committee, to present nominations of officers.

THURSDAY, JUNE 19—MORNING

The chairman of the Nominating Committee reported the following nominations of officers of the Section for the ensuing year: Chairman, Dr. William Ophüls, San Francisco; Vice-Chairman, Dr. L. B. Wilson, Rochester, Minn.; Secretary Mr. A. J. Carlson, Chicago; thus making the Executive Committee consist of Drs. Yandell Henderson, New Haven, Conn.; Leo Loeb, St. Louis, Mo., and A. W. Hewlett, Ann Arbor, Mich.; Delegate, Dr. Richard M. Pearce, Philadelphia; Alternate, Dr. E. C. Rosenow, Chicago.

It was moved and seconded that those nominated be elected. The motion was carried.

In the absence of Drs. Yandell Henderson, New Haven, Conn., and Leo Loeb, St. Louis, the Chairman appointed Drs. H. Gideon Wells, Chicago, and E. T. Bell, Minneapolis, as members of the Executive Committee for the approval of papers.

Drs. Frank P. Underhill, New Haven, Conn.; Samuel Goldsmith, New Haven, Conn., and H. Gideon Wells, Chicago, read a paper on "Studies on Experimental Nephritis Produced by Tartrates." Discussed by Drs. F. H. Scott, Minneapolis, and H. Gideon Wells, Chicago.

The following papers were read as a Symposium on The Thyroid Exophthalmic Goiter:

Dr. L. B. Wilson, Rochester, Minn.: "The Relation of the Pathology and the Clinical Symptoms of Simple and Exophthalmic Goiter."

Dr. E. V. Smith, Rochester, Minn.: "The Iodin Content of the Human Thyroid."

Dr. A. H. Sanford, Rochester, Minn.: "A Comparative Study of the Effects on Blood-Pressure of Goiter Extracts, Goiter Serum and Other Substances."

These three papers were discussed by Drs. F. H. Scott, Minneapolis; A. W. Hewlett, Ann Arbor, Mich.; L. B. Wilson, Rochester, Minn., and A. H. Sanford, Rochester, Minn.

Dr. E. T. Bell, Minneapolis, read a paper on "Cloudy Swelling." Discussed by Drs. H. Gideon Wells, Chicago, and E. T. Bell, Minneapolis.

Dr. H. E. Robertson, Minneapolis, read a paper on "Local Lesions following Intramuscular Injections of Salvarsan and Neosalvarsan." No discussion.

Dr. A. L. Grover, Iowa City, Iowa, read a paper on "Experimental Cirrhosis of the Liver." Discussed by Drs. Henry Albert, Iowa City, Iowa; H. E. Robertson, Minneapolis, and A. L. Grover, Iowa City, Iowa.

Drs. E. E. Southard and M. M. Canavan, Boston, read a paper on "The Bacteriology of Aortic Lymph-Nodes." Discussed by Drs. H. E. Robertson, Minneapolis; Henry Albert, Iowa City, Iowa, and E. E. Southard, Boston.

Drs. Henry H. Janeway and Ephraim M. Ewing, New York, read a paper on "The Relation of Acapnia to Shock." Discussed by Drs. H. E. Parsons, Denver; W. M. Boothby, Boston, and Henry H. Janeway, New York.

SECTION ON DERMATOLOGY

TUESDAY, JUNE 17—AFTERNOON

The Chairman, Dr. Joseph Zeisler, Chicago, called the meeting to order at 2:15 p. m. in Folwell Hall. He said that he was pleased to see such a good attendance, and expressed the hope that the profit and pleasure of the meeting would be enhanced by a free discussion of the papers.

Dr. John Butler, Minneapolis, invited the members to a banquet at the Country Club at 7:30 p. m., and said that automobiles for their transportation to the club had been provided.

Dr. Zeisler then read the Chairman's address, entitled "Our Tendency to Fads."

The chairman stated that before proceeding further with the scientific program, he would appoint a Nominating Committee.

Dr. M. L. Heidingsfeld, Cincinnati, moved that the nominations be made from the floor on the day set apart for the election of officers.

Dr. William A. Pusey, Chicago, offered as a substitute motion that the Chairman appoint the Nominating Committee.

Dr. H. R. Varney, Detroit, in seconding this motion, said that for many years it had been the usual custom for the Chairman to appoint this committee. The motion was thereupon carried.

The Chairman announced the following to act as a Nominating Committee: Drs. F. O. Foerster, Milwaukee, Chairman; M. L. Ravitch, Louisville, and H. G. Irvine, Minneapolis. The committee was asked to make its recommendations on Thursday morning.

Dr. J. B. Kessler, Iowa City, read a paper on "Two Cases of Pemphigus Foliaceus." Discussed by Drs. Alfred Schalek, Omaha; Richard L. Sutton, Kansas City, Mo.; W. A. Pusey, Chicago; Howard Fox, New York; H. H. Hazen, Washington, D. C.; M. Ravogli, Cincinnati; Isadore Dyer, New Orleans, and J. B. Kessler, Iowa City.

Dr. H. H. Hazen, Washington, D. C., read a paper on "An Anomalous Case of White-Spot Disease." Discussed by Drs. A. Ravogli, Cincinnati, and H. H. Hazen, Washington, D. C.

Dr. Frank E. Simpson, Chicago, read a paper on "Radium in Skin Diseases." Discussed by Drs. M. L. Heidingsfeld, Cincinnati; M. L. Ravitch, Louisville; Joseph Zeisler, Chicago; Fred Wise, New York; Alfred Schalek, Omaha; H. R. Varney, Detroit, and Frank E. Simpson, Chicago.

Dr. George M. MacKee, New York, read a paper on "The Massive Dose Roentgen-Ray Method in the Treatment of Skin Diseases." Discussed by Drs. Everett S. Lain, Oklahoma, Okla., and George M. MacKee, New York.

Dr. M. L. Heidingsfeld, Cincinnati, read a paper on "Neuromas of the Skin" (with lantern-slide demonstration). Discussed by Dr. Howard Fox, New York.

Dr. Fred Wise, New York, read a paper on "Angioma Serpiginosum (Infective Angioma of Hutchinson) with Report of a Very Extensive Case." Discussed by Drs. Joseph Zeisler, Chicago; George M. MacKee, New York; Howard Fox, New York, and Fred Wise, New York.

WEDNESDAY, JUNE 18—MORNING

Drs. S. E. Sweitzer, Minneapolis; H. G. Irvine, Minneapolis; Charles D. Freeman, St. Paul; C. A. Boreen, Minneapolis, and George P. Crume, Minneapolis, presented a number of clinical cases which were discussed by Drs. Richard L. Sutton, Kansas City, Mo.; Ernest D. Chipman, San Francisco; M. L. Ravitch, Louisville, Ky.; H. G. Irvine, Minneapolis; Charle D. Freeman, St. Paul; S. E. Sweitzer, Minneapolis; Alfred Schalek, Omaha; M. L. Heidingsfeld, Cincinnati; Joseph Zeisler, Chicago; David Lieberthal, Chicago; J. C. Elliott King, Portland, Ore.; Isadore Dyer, New Orleans, and Howard Fox, New York.

Dr. A. Ravogli, Cincinnati, read a paper on "Salvarsan and Profeta's Law." Discussed by Drs. Alfred Schalek, Omaha; M. L. Heidingsfeld, Cincinnati, and A. Ravogli, Cincinnati.

Drs. M. F. Engman, Rudolph Buhman, Robert H. Davis and F. D. Gorham, St. Louis, presented a joint paper on "A Study of the Spinal Fluid in One Hundred Cases of Syphilis." This was read by Dr. Rudolph Buhman and was discussed by Drs. F. G. Harris, Chicago; David Lieberthal, Chicago; H. G. Irvine, Minneapolis; M. L. Heidingsfeld, Cincinnati; H. H. Hazen, Washington, D. C., and Rudolph Buhman, St. Louis.

Drs. H. R. Varney and F. W. Baeslack, Detroit, read a paper on "Comparative Study of Antigens for the Wassermann Reaction." This was discussed by Drs. Howard Fox, New York; J. Frank Waugh, Chicago; M. L. Heidingsfeld, Cincinnati; Rudolph Buhman, St. Louis; H. R. Varney, Detroit, and F. W. Baeslack, Detroit.

Dr. Richard L. Sutton, Kansas City, Mo., read a paper on "The Histopathology of Pompholyx." Discusssed by Drs. Joseph Zeisler, Chicago; Isadore Dyer, New Orleans; W. A. Pusey, Chicago; Frank E. Simpson, Chicago; M. L. Ravitch, Louisville, Ky.; K. A. Zurawski, Chicago; Everett S. Lain, Oklahoma, Okla., and Richard L. Sutton, Kansas City, Mo.

Dr. Alfred Schalek, Omaha, read a paper on "Cutaneous Affections of Childhood." Discussed by Drs. W. A. Pusey, Chicago; David Lieberthal, Chicago; Burnside Foster, St. Paul; Everett S. Lain, Oklahoma, Okla.; M. L. Ravitch, Louisville, Ky.; K. A. Zurawski, Chicago, and Alfred Schalek, Omaha.

WEDNESDAY, JUNE 18—AFTERNOON

Dr. M. L. Ravitch, Louisville, read a paper on "Empiricism in Dermatologic Therapeutics." Discussed by Dr. A. Ravogli, Cincinnati.

Dr. Everett S. Lain, Oklahoma, Okla., read a paper on "A Study of Skin Diseases Among the Indians of Oklahoma." Discussed by Drs. Howard Fox, New York; M. L. Ravitch, Louisville; Ernest D. Chipman, San Francisco; A. J. Markley, Denver; Isadore Dyer, New Orleans; M. L. Heidingsfeld, Cincinnati, and Everett S. Lain, Oklahoma, Okla.

Dr. Ernest Dwight Chipman, San Francisco, read a paper on "The Newer Cutaneous Mycoses." Discussed by Drs. Richard L. Sutton, Kansas City, Mo.; A. Ravogli, Cincinnati; Arthur H. Schwartz, Duluth, Minn.; Joseph Zeisler, Chicago; H. E. Menage, New Orleans; Ernest D. Chipman, San Francisco, and David Lieberthal, Chicago.

Dr. A. J. Markley, Denver, read a paper on "Primary Sarcoma of the Lower Lip." Discussed by Drs. M. L. Heidingsfeld, Cincinnati, and A. J. Markley, Denver.

THURSDAY, JUNE 19—MORNING

The following officers were elected for the ensuing year: Chairman, Dr. Richard L. Sutton, Kansas City, Mo.; Vice-Chairman, Dr. J. B. Kessler, Iowa City, Iowa; Secretary, Dr. Howard Fox, New York; Delegate, Dr. William A. Pusey, Chicago; Alternate, Dr. Isadore Dyer, New Orleans.

Drs. Charles D. Freeman, St. Paul; Burnside Foster, St. Paul; S. E. Sweitzer, Minneapolis, and John Butler, Minneapolis, presented a number of patients. These cases were discussed by Drs. M. L. Heidingsfeld, Cincinnati; A. Ravogli, Cincinnati; Howard Fox, New York; Joseph Zeisler, Chicago; W. A. Pusey, Chicago; Charles D. Freeman, St. Paul; M. L. Ravitch, Louisville, Ky.; H. G. Irvine, Minneapolis; Burnside Foster, St. Paul; Isadore Dyer, New Orleans; H. E. Menage, New Orleans, and David Lieberthal, Chicago.

The Chairman spoke of the interest evoked by this clinical demonstration, and a vote of thanks was extended to the members of Minneapolis and St. Paul for their kindness in having these patients in readiness and bringing them to the meeting for inspection and discussion

Dr. Isadore Dyer, New Orleans, offered a resolution that any member of the Section on Dermatology who applies for space on the program of that Section and allows his name and the title of his paper to be published thereon, and then fails to be present at the meeting or to send a satisfactory excuse for his absence, shall be debarred from the program for two successive years thereafter; and any member who absents himself for two successive years after allowing the name and title of his paper to be published, with or without an excuse, shall be debarred for five years.

This resolution was carried, and the Secretary was requested to transmit a copy to the House of Delegates through the proper representative of the Section. (This failed to reach the House of Delegates.)

Dr. Burnside Foster, St. Paul, read a paper on "Relation of Diabetes to Various Dermatoses." Discussed by Drs. John M. Armstrong, St. Paul; Ernest D. Chipman, San Francisco; M. L. Heidingsfeld, Cincinnati; K. A. Zurawski, Chicago; H. E. Menage, New Orleans; Everett S. Lain, Oklahoma, Okla., and Burnside Foster, St. Paul.

Dr. H. G. Irvine, Minneapolis, read a paper on "Idiopathic Atrophy of the Skin, with Report of a Case" and presentation of the patient. Discussed by Drs. Richard L. Sutton, Kansas City, Mo.; M. L. Heidingsfeld, Cincinnati; W. A. Pusey, Chicago, and H. G. Irvine, Minneapolis.

Dr. Howard Fox, New York, read a paper on "Mycosis Fungoides Following Psoriasis." Discussed by Drs. Joseph Zeisler, Chicago; C. A. Boreen, Minneapolis; O. H. Foerster, Milwaukee; Frank E. Simpson, Chicago, and H. H. Hazen, Washington, D. C.

The Secretary read a communication from Dr. Alexander R. Craig, the Secretary of the Association, stating that at the meeting of the House of Delegates yesterday afternoon the House adopted the recommendation of the Reference Committe on Reports of Officers regarding the advisability of having the various Sections elect their secretaries for a term of more than one year.

Dr. Joseph Zeisler, the retiring Chairman, said that without unfairness he believed this concluded the most successful session that the Section on Dermatology had ever enjoyed in the history of the American Medical Association. The sessions were far better attended, and they had succeeded in introducing a very important feature, namely, the presentation of clinical cases. Furthermore, the discussion of the papers had been interesting and strictly to the point, without verbosity or divergence. The Section was now doing real scientific dermatologic work. It had outgrown its baby shoes and was now able to take rank with other scientific bodies. In closing his remarks, Dr. Zeisler congratulated the Section on having chosen as his successor a man who was so well worthy of the dignity of the position.

Dr. Richard L. Sutton, Kansas City, Mo., the newly elected Chairman, thanked the members for the honor they had conferred on him, and expressed the hope that the future work of the Section would prove the wisdom of their choice.

A vote of thanks was extended to the retiring Chairman of the Section, and also to the Secretary for their efficient services in connection with this meeting. A vote of thanks was also extended to the local members of the Section in Minneapolis and St. Paul for their efforts to make the meeting a success.

Adjourned.

SECTION ON OPHTHALMOLOGY

TUESDAY, JUNE 17—AFTERNOON

The Section was called to order by the Chairman, Dr. Hiram Woods, Baltimore, in the Law Building, University of Minnesota, Minneapolis.

Dr. Charles N. Spratt presented to the Section a case of buphthalmos operated on by the Elliott trephine method, and also a case of anophthalmos in a child belonging to the same family.

The Chairman announced that in the absence of Dr. W. C. Posey, member of the Executive Committee, Dr. Casey Wood, Chicago, would be appointed to serve in his stead for the session.

The Chairman, Dr. Hiram Woods, Baltimore, then read the Chairman's Address.

Dr. Walter B. Lancaster, Boston, read a paper on "Physiologic Optics the Basis for Teaching Clinical Ophthalmology." Discussed by Drs. Frank C. Todd, Minneapolis; Edward Jackson, Denver; S. D. Risley, Philadelphia; Lucien Howe, Buffalo, N. Y.; A. Edward Davis, New York; Frank Allport, Chicago; George H. Price, Nashville, Tenn.; Casey Wood, Chicago; Robert Sattler, Cincinnati, and Walter B. Lancaster, Boston.

Dr. Robert Sattler, Cincinnati, read a paper on "Some Modern Viewpoints with Regard to Glaucoma."

Dr. Mark J. Schoenberg, New York, read a paper on "Experimental Study of Intra-Ocular Pressure and Ocular Drainage."

Dr. William Zentmayer, Philadelphia, read a paper on "Hydrophthalmos. With a Histologic Report of Two Cases, One of Which Presented a Congenital Coloboma."

These three papers, on motion of Dr. Casey Wood, were discussed together by Drs. Lewis H. Taylor, Wilkes-Barre, Pa.; Emmet L. Jones, Cumberland, Md.; Adolf Alt, St. Louis; L. Webster Fox, Philadelphia; J. O. McReynolds, Dallas, Tex.; Allen Greenwood, Boston; Walter R. Parker, Detroit; S. D. Risley, Philadelphia; Lucien Howe, Buffalo, N. Y.; G. C. Savage, Nashville, Tenn.; J. S. Wyler, Cincinnati; Oscar Wilkinson, Washington, D. C.; W. H. Wilder, Chicago; Edward Jackson, Denver; Charles N. Spratt, Minneapolis; Robert Sattler, Cincinnati; Mark J. Schoenberg, New York, and William Zentmayer, Philadelphia.

Dr. Edward Jackson, Denver, moved that the recommendations of the Chairman's address be referred to the Executive Committee to consider and report what action the Section should take at the executive session. Carried.

WEDNESDAY, JUNE 18—MORNING

Dr. William E. Shahan, St. Louis, read a paper on "Equivalent Values in Spectacle Lenses." He announced that some new discoveries made it necessary to add considerable to his paper, and he wished to present it as the paper read at the session. Discussed by Drs. W. R. Murray, Minneapolis; F. Park Lewis, Buffalo, N. Y.; Walter Baer Weidler, New York; George H. Price, Nashville, Tenn.; J. S. Lichtenberg, Kansas City, Mo.; John A. Donovan, Butte, Mont.; Walter B. Lancaster, Boston, and W. E. Shahan, St. Louis.

The following papers were read as a symposium on Trachoma:

Dr. J. W. Schereschewsky, Washington, D. C., could not be present and his paper on "Trachoma Among the Indians" was read by Dr. J. W. Kerr, Washington, D. C.

Dr. John McMullen, Washington, D. C.: "Trachoma, Its Prevalence and Control Among Immigrants."

Dr. J. A. Stucky, Lexington, Ky.: "Trachoma Among the Mountaineers of Eastern Kentucky. Illustrated by Lantern-Slides."

The papers of this symposium were discussed by Drs. Edgar S. Thompson, New York; L. Webster Fox, Philadelphia; F. Park Lewis, Buffalo, N. Y.; S. D. Risley, Philadelphia; G. E. Seaman, Milwaukee, Wis.; William Zentmayer, Philadelphia; Lucien Howe, Buffalo, N. Y.; Meyer Wiener, St. Louis; Edward Jackson, Denver; Frank Allport, Chicago; J. S. Lichtenberg, Kansas City, Mo.; H. Copley Greene, Boston; John McMullen, Washington, D. C.; John W. Kerr, Washington, D. C., and J. A. Stucky, Lexington, Ky.

Dr. Lucien Howe, Buffalo, presented a model of an instrument described as a wing test for heterophoria, including cyclophoria. He explained that the instrument was first suggested by Maddox, who made a rough model like the one presented, but did not describe it. The model was brought to Buffalo by Dr. J. C. Clement. The instrument consisted of a stereoscopic frame, having aluminum wings on the shaft between the lenses and the objective, which consisted of a card with numerals and an arrow pointing to the line of numbers.

Dr. J. S. Lichtenberg, Kansas City, Mo., presented a modification of the scleral trephine having a needle or point by which

the instrument might be fixed on the sclera in getting it started. A point in the operation is, after having dissected the conjunctiva back, to curet all tissue away down to the sclera before starting the trephine.

Dr. Adolph Alt, St. Louis, Mo., exhibited with the projection microscopic slides showing holes in the macula.

Dr. Walter Baer Weidler, New York, showed four slides of tissue removed from a case of blepharochalasis.

Dr. Edgar S. Thomson, New York, exhibited slides of a sarcoma of the chorioidal type, in which case there had been a rupture of the eyeball with tremendous hemorrhage.

Dr. George S. Derby, Boston, showed slides prepared from Dr. Verhoeff's case of Parinaud's conjunctivitis; also sections of a tumor of the lacrimal sac from a patient 35 years old. It was found to be made up largely of plasma cells with a large amount of hyaline degeneration. It was a plasmona or pseudoplasmona, of which there are only a few instances in the literature.

WEDNESDAY, JUNE 18—AFTERNOON

Dr. George S. Derby, Boston, announced that the microscopic slide of the specimen from Dr. Verhoeff's case of Parinaud's conjunctivitis showing the organism found by Dr. Verhoeff was under the microscope in the room and could be examined by the members. Dr. Verhoeff thinks the organism is a leptothrix. It stains by a modified Gram stain and is found in the spots of necrosis.

Dr. Lucien Howe, Buffalo, N. Y., gave an exhibition of the delicacy of measurements of temperature with the galvanometer. Variations of 1/500 to 1/10,000 of a degree Centigrade can be measured.

Dr. William H. Wilder, Chicago, read a paper on "Metastatic Ophthalmia. Report of Three Cases, One of which Resulted in Recovery of Vision." Discussed by Drs. Oscar Wilkinson, Washington, D. C.; Allen Greenwood, Boston; Casey Wood, Chicago; Edward Jackson, Denver; Adolf Alt, St. Louis; and W. H. Wilder, Chicago.

Dr. A. Edward Davis, New York, read a paper on "The Diagnostic and Therapeutic Uses of Tuberculin in Ocular Diseases, with a Review of Some of the Claims Made for It."

On motion of Dr. A. Greenwood, Boston, and at the request of Dr. Will Walter, Chicago, the next paper was read and the two discussed together.

Dr. Will Walter, Chicago, read a paper on "Phlyctenular Ophthalmia and Episcleritis. A Study of the Bearing of the Newer Research on Their Etiology as the Basis of a Scientific Therapy."

These two papers were discussed by Drs. W. E. Gamble, Chicago; George S. Derby, Boston; Charles N. Spratt, Minneapolis; Albert E. Bulson, Jr., Ft. Wayne, Ind.; S. L. Ledbetter, Birmingham, Ala.; Mark J. Schoenberg, New York; Walter Baer Weidler, New York; Melville Black, Denver; J. S. Weyler, Cincinnati; John A. Donovan, Butte, Mont.; Hiram Woods, Baltimore; William Zentmayer, Philadelphia; W. H. Wilder, Chicago; Oscar Wilkinson, Washington, D. C.; A. E. Davis, New York, and Will Walter, Chicago.

Dr. Lucien Howe, Buffalo, read a paper on "The Temperature of the Conjunctiva." Discussed by Drs. Edward Jackson, Denver; Melville Black, Denver; Allen Greenwood, Boston; Mark J. Schoenberg, New York; W. H. Wilder, Chicago; George H. Price, Nashville, and Lucien Howe, Buffalo.

Dr. Clifford B. Walker, Boston, read a paper on "The Topical Diagnostic Value of the Hemiopic Pupillary Reaction and the Wilbrand Hemianoptic Prism Phenomenon, with a New Method of Performing the Latter." Discussed by Drs. C. D. Wescott, Chicago; Walter B. Lancaster, Boston, and Clifford B. Walker, Boston.

WEDNESDAY, JUNE 18—EVENING

Mr. Henry Copley Greene, Boston, read a paper on "Preventable Blindness: Challenge to the Professions." Discussed by Drs. W. H. Wilder, Chicago; Casey A. Wood, Chicago; Thomas A. Woodruff, Chicago; Lucien Howe, Buffalo, N. Y., and Mr. Henry Copley Greene, Boston.

THURSDAY, JUNE 19—MORNING

Dr. H. B. Lemere, Omaha, read a paper on "Apparent Esophoria and Its Relation to Convergence Insufficiency." Discussed by Drs. G. C. Savage, Nashville, Tenn.; S. D. Risley, Philadelphia; Edward Jackson, Denver; Casey Wood, Chicago; Oscar Wilkinson, Washington, D. C.; C. D. Westlake, Chicago; George H. Price, Nashville, Tenn., and H. B. Lemere, Omaha.

The Chairman announced that the Section would take up the regular order of business and have the report of the Executive Committee, Dr. A. E. Bulson, Jr., Chairman. The following officers were elected: Chairman, Dr. Frank C. Todd, Minneapolis; Vice-Chairman, Dr. William Zentmayer, Philadelphia; Secretary (for a term of three years), Dr. George S. Derby, Boston; Delegate, Dr. Melville Black, Denver.

The Executive Committee recommended that a committee of six members of the Section be appointed to study and report at the next meeting on the Teaching of Ophthalmology in our Medical Schools, and that the retiring Chairman of the Section be a member of this committee.

The Executive Committee also recommended that a committee of five members be appointed by the Chairman of the Section to consider and report on optometry legislation, and that of this committee Dr. Hiram Woods be a member.

The report of the committee was adopted.

The Chairman announced that he would report in reference to the committees later.

Report on the Knapp Testimonial Fund having been called for, Dr. A. E. Bulson, Jr., Chairman, reported that 255 members had contributed, the majority having contributed $5 each and the remainder less than $5; there was on hand in cash practically $900. He made a plea for a more hearty response to the request for subscriptions to this fund. He explained that subscriptions of $5 or more entitled the member to the bound Transactions and the Ophthalmic Year Book, and that in addition they were contributing to the perpetuation of the Knapp Medal, which is offered to members of the Section for the best scientific work on various lines or a contribution to the literature. In response to a question by Dr. Casey A. Wood as to whether or not a list was kept of contributing members and bills sent to them from year to year, the Chairman said that the announcements would be sent from his office; that subscriptions must be in promptly after the meeting if members were to receive the bound transactions, as the Association office must know at an early date after the meeting how many bound volumes were to be provided for.

Dr. Edward Jackson made a statement in regard to the delay in getting out the Year Book this year, as there were two years of work involved, and the number of publishers who could handle the work to advantage were very few, the office of the American Medical Association perhaps having the best facilities. He explained that the book would be mailed soon.

Dr. F. Park Lewis moved the adoption of Dr. Bulson's report, which was seconded. Dr. Lewis inquired whether there was any method by which individual foreign journals could be obtained by the members. Dr. Jackson answered that they might be borrowed from the Surgeon-General's Office, or from American subscription agents in New York. Dr. L. H. Taylor explained that they might be had from the New York Book Co.

The motion for the adoption of the report carried.

Dr. A. E. Bulson announced that it would be necessary to elect a Committee on Award of the Knapp Medal, and in order to save time suggested the following names for that committee for the year 1913: Drs. Edward Jackson, Denver; Casey A. Wood, Chicago; John E. Weeks, New York.

The Chairman explained that according to the rule established by the Section, this Committee of Award is elected by the Section.

Dr. G. C. Savage moved that the men named by Dr. Bulson be made the Committee. Seconded.

Dr. George H. Price moved that the nominations be closed and that the members named constitute the committee. Seconded.

The Chairman declared that the members named were duly elected as members of the Committee on Award of the Knapp Medal.

Dr. Lucien Howe, Chairman, reported progress for the Committee on Study of the Ocular Muscles, and moved that the report which appeared in the presession volume two years ago (1911) appear in the regular Transactions of this year.

The motion was seconded.

After considerable discussion, Dr. S. D. Risley moved as an amendment to the original motion that the report be referred back to the publication committee with power to act. This was seconded.

It was explained that the Section had no publication committee other than the Executive Committee, and, with the consent of Dr. Risley, Executive Committee was substituted for Publication Committee in his motion. Dr. Sagage, who had objected to the original motion, stated that he was willing that the substitute motion should be adopted.

Dr. Bulson objected because the report was not on the merits of the question submitted to the committee, and moved that the whole matter be made a matter of discussion and action by the Section next year. Dr. Risley called attention to the fact that the Executive Committee could make such a recommendation under his motion.

The Chair stated that the question was on Dr. Risley's amendment to Dr. Howe's motion, that the matter be referred to the Executive Committee with power to act. It carried. It was declared that this disposed of the original motion.

Dr. Casey A. Wood of the Committee on Conservation of Vision reported that the elaborate report prepared by that committee had been taken up by the Council on Health and Public Instruction and would be printed and circulated by them; that the committee had been requested to meet with the Council in Minneapolis, which had been done. The Council suggested that the Section on Ophthalmology suggest a representative committee o fthe Section, and that the Council would nominate them as part of its Committee on Conservation of Vision. The following names were suggested to the Council: Drs. Frank Allport, Chicago, Chairman; Hiram Woods, Baltimore; F. Park Lewis, Buffalo, N. Y.; Vard H. Hulen, San Francisco; Harold Gifford, Omaha; W. E. Bruner, Cleveland, Ohio; E. C. Ellet, Memphis, Tenn.; Walter B. Lancaster, Boston; W. H. Wilder, Chicago; H. D. Bruns, New Orleans; J. J. Carroll, Baltimore; E. M. Alger, New York; W. C. Posey, Philadelphia, and Casey A. Wood, Chicago.

The committee asked to be discharged.

Dr. A. E. Bulson moved the adoption of the report and the discharge of the committee. Carried.

The Chairman announced that the Committee on Education in Ophthalmology would consist of Drs. Edward Jackson, Denver, Chairman; William H. Wilder, Chicago; Walter R. Parker, Detroit; William Zentmayer, Philadelphia; Alexander Duane, New York, and by suggestion of the Executive Committee, Hiram Woods, Baltimore.

It was announced that the Chairman of the Committee on Optometry would be William C. Posey, but the other members of the committee would not be announced at this time it the Section would consent to this arrangement.

Dr. Edward Jackson, Denver, moved that the Chairman be given time to appoint that committee. Adopted by consent.

Dr. Allen Greenwood, Boston, read a paper on "Ocular Vertigo." Discussed by Drs. Albert E. Bulson, Jr., Ft. Wayne, Ind.; G. C. Savage, Nashville, Tenn.; E. L. Jones, Cumberland, Md.; L. H. Taylor, Wilkes-Barre, Pa.; C. D. Wescott, Chicago; F. Park Lewis, Buffalo, N. Y.; Walter B. Lancaster, Boston; George S. Derby, Boston; Edward Jackson, Denver; Hiram Woods, Baltimore, and Allen Greenwood, Boston.

Dr. Samuel D. Risley, Philadelphia, read a paper on "Is the Percentage of Myopic Eyes Diminishing?" Discussed by Drs. F. Park Lewis, Buffalo, N. Y.; Albert E. Bulson, Jr., Ft. Wayne, Ind., and S. D. Risley, Philadelphia.

Dr. John B. Potts, Omaha, read a paper on "Some Comparative Measurements of the Skull and Sella Turcica, with the Report of Eight Cases." Discussed by Drs. William H. Mick, Omaha, and John B. Potts, Omaha.

THURSDAY, JUNE 19—AFTERNOON

Dr. Walter Baer Weidler, New York, read a paper on "Blepharochalasis. Report of Two Cases with the Microscopic Examination." Discussed by Drs. Edgar S. Thomson, New York; Arthur J. Bedell, Albany, N. Y., and Walter Baer Weidler, New York.

Dr. Nelson M. Black, Milwaukee, Wis., read a paper on "Artificial Illumination a Factor in Ocular Discomfort." Discussed by Herbert E. Ives, Philadelphia. Dr. Black exhibited a number of lantern-slides of the spectra of different kinds of artificial lights and explained them.

Dr. Walter R. Parker, Detroit, read a paper on "Postcataract Extraction Delirium. Report of Eleven Cases." Discussed by Drs. Edward Jackson, Denver; Allen Greenwood, Boston; C. D. Wescott, Chicago; Melville Black, Denver; William Zentmayer, Philadelphia; S. D. Risley, Philadelphia, and Walter R. Parker, Detroit.

Dr. Lee Masten Francis, Buffalo, N. Y., read a paper on "Surgical Treatment of a Certain Type of Penetrating Wounds of the Sclera by a Double Conjunctival Flap." Discussed by Drs. John A. Donovan, Butte, Mont.; W. H. Wilder, Chicago; Allen Greenwood, Boston, and Lee Masten Francis, Buffalo.

Dr. Charles Nelson Spratt, Minneapolis, read a paper on "Primary Lues of the Bulbar Conjunctiva." Discussed by Drs. Arthur J. Bedell, Albany, N. Y., and Charles Nelson Spratt, Minneapolis.

Remarks were made by Dr. Savage and Dr. Hiram Woods, and the thanks of the Section were given to the university and the people and the profession of Minneapolis who contributed to the success of the meeting. Dr. Frank C. Todd, the Chairman-Elect, made some remarks and the Section adjourned.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

TUESDAY, JUNE 17—AFTERNOON

The Chairman, Dr. Guy L. Kiefer, called the meeting to order at 2:20 p. m.

The Secretary, Dr. C. Hampson Jones, omitting certain portions, read the minutes of the last meeting, held June 4 to June 6, inclusive, 1912, at Atlantic City, which, without alteration, were adopted.

Dr. Kiefer then read his Chairman's address and oration. No discussion.

Dr. J. W. Trask, Washington, D. C., read a paper on "Morbidity Reports: Their Purpose and Present Status." Discussed by Mr. Louis Dublin, statistician of the Metropolitan Life Insurance Co., New York; and by Drs. Pauline M. Townsend-Hanson, Marshalltown, Iowa; P. M. Hall, Minneapolis; C. Hampson Jones, Baltimore; James A. Hayne, Columbia, S. C., and Liston H. Montgomery, Chicago.

Dr. Harold B. Wood, Rochester, Minn., read a paper on "The Need for Whole-Time Health Officers." Discussed by Drs. W. C. Rucker, Washington, D. C.; W. A. Howe, Albany, N. Y.; Otto P. Geier, Cincinnati; J. N. Hurty, Indianapolis; Pauline M. Townsend-Hanson, Marshalltown, Iowa; E. F. Otis, Penuelas, Porto Rico; M. W. Richardson, Boston, and Harold B. Wood, Rochester, Minn.

There being no report from the committee appointed at the last meeting to cooperate with the officials of the Bureau of Census and with any committee that might be appointed by the Association of Municipal Health Officers to arrange a scheme of standard or uniform accounts and reports of municipal departments of health, the committee, consisting of Drs. W. F. Snow, San Francisco; W. A. Evans, Chicago; H. M. Bracken, Minneapolis; G. T. Schwartz, Providence, R. I., and C. H. Jones, Baltimore, was continued, with the substitution, at the request of Dr. W. A. Evans, Chicago, of Dr. L. G. Powers' name for his own.

The Chairman then, through the Secretary, announced his appointments for the following: 1. Committee on Nominations: Drs. W. A. Evans, M. P. Ravenel and Otto P. Geier. 2. Commmittee on Resolutions: Drs. J. W. Trask, J. N. Hurty and P. M. Hall.

WEDNESDAY, JUNE 18—MORNING

Dr. W. A. Evans, Chicago, moved that a committee be appointed to draft suitable resolutions relating to the forthcoming retirement from public health work of Dr. Guy L. Kiefer, such resolutions to be transmitted to the city council of Detroit. The motion prevailed, and Dr. Evans appointed Drs. Hall, Albert and Heinz as such committee.

Dr. E. F. Otis, Penuelas, Porto Rico, read a paper on "Experiences of a Health Officer in Porto Rico." Discussed by Drs. J. W. Trask, Washington, D. C., and E. F. Otis, Penuelas, Porto Rico.

Dr. Henry Albert, Iowa City, Iowa, read a paper on "The Treatment of Diphtheritic Carriers." Discussed by Drs. L. L. Ten Broeck, Minneapolis; Harold B. Wood, Rochester, Minn.; D. L. Richardson, Providence, R. I.; C. H. Jones, Baltimore; M. P. Ravenel, Madison, Wis.; E. F. Otis, Penuelas, Porto Rico, and Henry Albert, Iowa City, Iowa.

Dr. W. C. Rucker, Washington, D. C., read a paper on "The Legal Aspect of the Federal Protection of the Public Health." Discussed by Drs. Pauline M. Townsend-Hanson, Marshalltown, Iowa; James A. Hayne, Columbia, S. C., and W. C. Rucker, Washington, D. C.

Dr. M. P. Ravenel, Madison, Wis., read a paper on "The Effects of Antityphoid Vaccination on the Normal Leukocyte Count," by Dr. Karl W. Smith, Madison, Wis. Discussed by Drs. Henry Albert, Iowa City, Iowa, and M. P. Ravenel, Madison, Wis.

Dr. Oscar Dowling, Shreveport, La., moved that the House of Delegates be requested to elect to associate fellowship in the American Medical Association the author of "The Great American Fraud," Mr. Samuel Hopkins Adams. The motion was seconded and carried. [The House concurred.]

WEDNESDAY, JUNE 18—AFTERNOON

The Secretary, Dr. C. Hampson Jones, read a letter from the Secretary of the American Medical Association, dated Minneapolis, June 18, 1913, stating that C. Wardell Stiles, Washington, D. C., had been suggested for associate membership in the American Medical Association and asking the endorsement of said application by the officers of the Section; which endorsement the Secretary, Dr. Jones, stated that the Chairman, Dr. Kiefer, and he had given.

Dr. A. W. Lescohier, Detroit, read a paper on "Duration of Immunity Following Vaccination." Discussed by Drs. C. N. Hensel, St. Paul; V. C. Vaughan, Jr., Detroit; C. A. Harper, Madison, Wis.; P. M. Hall, Minneapolis; C. Hampson Jones, Baltimore; A. W. Lescohier, Detroit; Harold B. Wood, Rochester, Minn., and Guy L. Kiefer, Detroit.

Dr. M. Clayton Thrush, Philadelphia, read a paper on "The Value of Sanitation as Applied to Railways and Other Large Corporations." Discussed by Drs. W. C. Rucker, Washington, D. C.; A. M. Hume, Owosso, Mich.; Albert E. Campbell, Chicago; C. C. Pratt, Mankato, Minn.; R. Q. Lillard, Ashville, Tenn.; Margaret M. Ryan, Brookston, Minn., and M. Clayton Thrush, Philadelphia.

Dr. John S. Fulton, Baltimore, read a paper on "Isolation of the Typhoid Bacillus from Milk Which Caused a Typhoid Outbreak," by Drs. William Royal Stokes and Harry W. Stones, Baltimore. No discussion.

THURSDAY, JUNE 19—MORNING

The Committee on Nominations reported the following nominations: Chairman, Dr. M. P. Ravenel, Madison, Wis.; Vice-Chairman, Dr. W. C. Rucker, Washington, D. C.; Secretary, Dr. C. Hampson Jones, Baltimore; Delegate, Dr. M. Smith, Little Rock, Ark., and Alternate, Dr. P. M. Hall, Minneapolis. On motion of Dr. A. M. Harvey, Chicago, seconded by Dr. Guilford H. Sumner, Des Moines, Iowa, and duly carried, the Secretary cast the ballot of the Section for these nominees, who thus became the incumbents of the respective offices for the ensuing year.

Dr. R. Q. Lillard, Lebanon, Tenn., presented a resolution that a committee of three be appointed by the Chairman of this Section, two members of the Section and one from the Public Health Service, to investigate cerebrospinal meningitis and report their findings at the next annual meeting. The motion, seconded by Dr. P. M. Hall, Minneapolis, and discussed by Dr. W. A. Evans, Chicago, prevailed.

The Committee on Resolutions relating to the retirement from active public health work of Dr. Guy L. Kiefer, presented the following:

To the Board of Health of the City of Detroit: The Section on Preventive Medicine and Public Health of the American Medical Association, in convention assembled at Minneapolis, has learned of the voluntary retirement of Dr. Guy L. Kiefer, as your health officer. We desire to express to you, to the citizens of your city, to the citizens of the State of Michigan, and to the public health workers everywhere, the keen regret we feel in the retirement of Dr. Kiefer from active public-health work. As health officer he has been eminently progressive and successful. As a public-health worker his advice and counsel has been sound and conservative. We trust that in some way advisory or educational his services may not be entirely lost to you and to the cause of public health.

P. M. HALL,
E. A. HINES,
HENRY ALBERT,
Committee.

This expression of appreciation was duly adopted and elicited the thanks of Dr. Kiefer.

Dr. Pauline M. Townsend-Hanson, Marshalltown, Iowa, presented a motion that a committee of three be appointed by the Chairman to investigate and report at the next meeting of the Section on poverty in its relation to disease and the best methods of diminishing poverty.

The motion, seconded by Dr. W. A. Evans, Chicago, was discussed by Drs. S. A. Knopf, New York; Pauline M. Townsend-Hanson, Marshalltown, Iowa, and W. A. Evans, Chicago; was amended by suggestion of Dr. Guy L. Kiefer, Detroit, to read "five" instead of "three," and thus finally prevailed.

Dr. Mary E. Lapham, Highland, N. C., read a paper on "Field Work in Tuberculosis." Discussed by Drs. Rosina Wistein, Chicago; Guilford H. Sumner, Des Moines, Iowa; Severance Burrage, Indianapolis; C. C. Browning, Los Angeles; W. A. Evans, Chicago; Gertrude Felker, Dayton, Ohio, and Mary E. Lapham, Highland, N. C.

Dr. V. C. Vaughan, Jr., Detroit, read a paper on "Early Diagnosis of Pulmonary Tuberculosis." Discussed by Drs. S. A. Knopf, New York; E. S. Everhard, Dayton, Ohio; C. C. Browning, Los Angeles; F. L. Class, Huron, S. Dak.; M. P. Ravenel, Madison, Wis.; M. Collins, Denver; H. E. Dearholt, Milwaukee, Wis., and V. C. Vaughan, Jr., Detroit.

Dr. Mary Lawson Neff, Fairfield, Iowa, read a paper on "The Minimizing of Insanity." Discussed by Drs. Pauline M. Townsend-Hanson, Marshalltown, Iowa; E. S. Everhard, Dayton, Ohio; J. N. Hurty, Indianapolis; M. D. Oberholzer, Harrisonville, Mo.; S. A. Knopf, New York; A. W. Erskine, Cedar Rapids, Iowa; Bertha Van Hoosen, Chicago, and Mary Lawson Neff, Fairfield, Iowa.

THURSDAY, JUNE 19—AFTERNOON

The Chairman, through the Secretary, then announced his appointments for the following: 1. Committee to cooperate with U. S. Public Health Service in a study of cerebrospinal meningitis: Drs. R. Q. Lillard, Nashville, Tenn.; James A. Hayne, Columbia, S. C.; R. H. Van Ezdorf, Mobile. 2. Committee to investigate poverty, etc.: Drs. Pauline M. Townsend-Hanson, Marshalltown, Iowa; W. A. Evans, Chicago; J. N. Hurty, Indianapolis; S. A. Knopf, New York; Mary Lawson Neff, Fairfield, Iowa.

Dr. P. M. Hall, Minneapolis, read a paper on "Some New Minnesota Laws on Tuberculosis." Discussed by Drs. S. A. Knopf, New York; V. C. Vaughan, Jr., Detroit; W. J. Markley, Minneapolis; J. N. Hurty, Indianapolis; Otto P. Geier, Cincinnati; C. Hampson Jones, Baltimore; L. S. D. Robinson, St. Paul; W. A. Evans, Chicago; Liston H. Montgomery, Chicago; Guy L. Kiefer, Detroit; J. W. Trask, Washington, D. C., and P. M. Hall, Minneapolis.

Dr. J. R. Williams, Rochester, N. Y., read a paper on "Ice as a Factor in Public Health." Discussed by Drs. L. S. D. Robinson, St. Paul, and J. R. Williams, Rochester, N. Y.

The Secretary, Dr. C. Hampson Jones, then read a paper on "The Use of Blood Agar in Routine Examination of Milk Sediments," by Dr. F. W. Hachtel, Baltimore. No discussion.

Dr. J. N. Hurty, Indianapolis, presented a motion that the Chairman appoint a committee to investigate and report to this

Section the method by which the physician in general practice can best assist the hospitals for the insane in securing adequate case histories and in reducing insanity.

Dr. W. A. Evans, Chicago, seconded the resolution which, amended on suggestion of Dr. S. A. Knopf, New York, by striking out the words "in general practice," thus prevailed.

Dr. W. A. Evans, Chicago, moved a vote of thanks to the Chairman and Secretary, which prevailed. The Section then, on motion, adjourned *sine die*; whereupon the retiring Chairman, Dr. Guy L. Kiefer, recorded the appointment of Drs. J. N. Hurty, Indianapolis; Mary L. Neff, Fairfield, Iowa, and Henry Albert, Iowa City, Iowa, as the committee on insanity, etc., in compliance with resolution previously carried.

SECTION ON GENITO-URINARY DISEASES

TUESDAY, JUNE 17—AFTERNOON

The meeting was called to order at 2:15 p. m., the Chairman, Dr. Hugh H. Young, Baltimore, presiding.

The Chairman said that owing to the fact that neither the Delegate of the Section to the House of Delegates, nor the Alternate, was present, it would be necessary to select a Delegate and Alternate. Thereupon Dr. Bransford Lewis, St. Louis, and Dr. Thomas M. Paul, St. Joseph, Mo., were elected Delegate and Alternate, respectively.

The Chairman called attention to the fact that last year one hundred copies of the Transactions had been sent abroad to journals, libraries and prominent men, and suggested that it would be desirable to do the same thing this year.

Dr. W. M. Spitzer, Denver, read a paper entitled, "A Study of the Normal Kidney, Its Pelvis and Ureter, with Stereopticon Views." Discussed by Drs. O. S. Fowler, Denver; W. F. Braasch, Rochester, Minn., and W. M. Spitzer, Denver.

Dr. Bransford Lewis, St. Louis, gave "Stereopticon Views of Pathologic Conditions of the Ureter and Kidney, with Methods of Examination and Their Bearing on Diagnosis." No discussion.

Dr. W. F. Braasch, Rochester, Minn., read a paper on "Essential Hematuria." Discussed by Drs. J. R. Caulk, St. Louis; O. S. Fowler, Denver; A. L. Chute, Boston, and W. F. Braasch, Rochester, Minn.

Dr. O. S. Fowler, Denver, read a paper on "Experimental Kidney Surgery." Discussed by Drs. Walter E. Scott, Adel, Iowa; A. L. Chute, Boston; W. M. Spitzer, Denver; Granville MacGowan, Los Angeles; Hugh H. Young, Baltimore; W. F. Braasch, Rochester, Minn.; George G. Smith, Boston, and O. S. Fowler, Denver.

Dr. Henry Dawson Furniss, New York, read a paper on "The Use of Indigocarmin Intravenously."

Dr. John T. Geraghty, Baltimore, read a paper on "The Value of Various Functional Tests in the Differential Diagnosis of Renal Diseases."

These two papers were discussed by Drs. Louis E. Schmidt, Chicago; W. F. Braasch, Rochester, Minn.; J. R. Caulk, St. Louis; A. J. Folsom, Dallas, Tex.; Henry Dawson Furniss, New York; Granville MacGowan, Los Angeles; Hugh H. Young, Baltimore; Henry Dawson Furniss, New York, and John T. Geraghty, Baltimore.

WEDNESDAY, JUNE 18—MORNING

Dr. J. R. Caulk, St. Louis, read a paper entitled, "Ureterovesical Cysts: An Endovesical Operative Procedure for Their Relief."

Dr. D. N. Eisendrath, Chicago, read a paper on "The Formation of a New Ureter: Experimental Study."

Dr. Carl Beck, Chicago, read a paper on "Implantation of the Ureter Into the Bowel, with Report of Two Cases."

Dr. M. Krotoszyner, San Francisco, read a paper on "Untoward Results of Nephrolithotomy."

These four papers were discussed by Drs. George G. Smith, Boston; V. D. Lespinasse, Chicago; D. N. Eisendrath, Chicago; O. S. Fowler, Denver; Hugh Cabot, Boston; Louis E. Schmidt, Chicago; William T. Belfield, Chicago; J. R. Caulk, St. Louis; Hugh H. Young, Baltimore, and M. Krotoszyner, San Francisco.

Dr. Hugh H. Young, Baltimore, then delivered the Chairman's Address, taking for his subject "The Present Status of the Diagnosis and Treatment of Tumors of the Bladder." Discussed by Drs. Hugh Cabot, Boston; Granville MacGowan, Los Angeles; A. C. Stokes, Omaha; Louis E. Schmidt, Chicago; J. R. Caulk, St. Louis, and D. N. Eisendrath, Chicago.

WEDNESDAY, JUNE 18—AFTERNOON

Dr. George G. Smith, Boston, read a paper on "Chronic Cystitis in Women Not a Disease." Discussed by Drs. Bransford Lewis, St. Louis; O. S. Fowler, Denver; W. T. Elam, St. Joseph, Mo.; M. Krotoszyner, San Francisco; J. R. Caulk, St. Louis; Thomas M. Paul, St. Joseph, Mo.; A. I. Folsom, Dallas, Tex.; A. L. Chute, Boston, and George G. Smith, Boston.

Dr. Granville MacGowan, Los Angeles, read a paper on "The Transverse Incision of the Skin and Abdominal Fascia as a Method of Approach in Suprapubic Operations on the Bladder and Prostate." Discussed by Drs. W. T. Elam, St. Joseph, Mo.; M. Krotoszyner, San Francisco; G. G. Smith, Boston; A. L. Chute, Boston, and Granville MacGowan, Los Angeles.

Dr. E. O. Smith, Cincinnati, read a paper on the "Pathology of the Prostate, with Lantern-Slide Demonstration." Discussed by Drs. John T. Geraghty, Baltimore; Bransford Lewis, St. Louis; Hugh H. Young, Baltimore, and E. O. Smith, Cincinnati.

Dr. William T. Belfield, Chicago, read a paper entitled, "Radiographic Observations of Pus-Tubes in the Male."

Dr. V. D. Lespinasse, Chicago, read a paper on "Transplantation of the Testicle."

These two papers were discussed by Drs. E. O. Smith, Cincinnati; V. D. Lespinasse, Chicago; William T. Belfield, Chicago, and V. D. Lespinasse, Chicago.

The Chairman announced the appointment of Drs. J. R. Caulk, St. Louis; F. M. McCallum, Kansas City, Mo., and G. G. Smith, Boston, as members of the nominating committee.

THURSDAY, JUNE 19—MORNING

The following officers were elected for the ensuing year: Chairman, Dr. Arthur L. Chute, Boston; Vice-Chairman, Dr. Granville MacGowan, Los Angeles; Secretary, Dr. Louis E. Schmidt, Chicago; Delegate, Dr. V. D. Lespinasse, Chicago, and Alternate, Dr. E. O. Smith, Cincinnati.

The following papers were read as a Symposium on Diseases of the Testicle:

Dr. Arthur D. Bevan, Chicago: "Operative Treatment of Undescended Testis."

Dr. A. C. Stokes, Omaha: "The Probable Embryonic Origin of Tumors of the Testicle, with Report of Two Cases and Lantern-Slide Demonstration."

Dr. O. Lyons, Denver: "Primary Tuberculosis of the Genital Organs in Children."

Dr. Hugh Cabot, Boston: "The Indications for and Technic of the Operative Treatment of Genital Tuberculosis."

The four papers of this symposium were discussed by Drs. Louis E. Schmidt, Chicago; Bransford Lewis, St. Louis; Hugh Cabot, Boston; A. D. Bevan, Chicago; V. D. Lespinasse, Chicago; Granville MacGowan, Los Angeles; Hugh H. Young, Baltimore; S. A. Mahoney, Holyoke, Mass.; A. C. Stokes, Omaha, and Hugh Cabot, Boston.

The paper of Dr. W. W. Townsend, Rutland, Vt., entitled, "The Pseudodiphtheria Organism in the Urinary Tract," was read by Dr. G. G. Smith, Boston.

Dr. Frank Hinman, Baltimore, read a paper entitled, "An Experimental Study of the Value of the Internal Use of Hexamethylenamin, with the Report of a Simple Clinical Method of Quantitative Estimation of Formaldehyd."

Dr. M. L. Heidingsfeld, Cincinnati, read a paper on "Clinical and Laboratory Salvarsan Relapses, and Their Remedy."

Dr. Victor Vecki, San Francisco, read a paper on the "Progress in the Treatment of Syphilis."

These four papers were discussed by Drs. G. G. Smith, Boston; M. Krotoszyner, San Francisco; H. A. Cohen, Minneapolis; A. L. Wolbarst, New York; E. G. Ballenger, Atlanta, Ga.; John T. Geraghty, Baltimore; Louis E. Schmidt, Chicago; M. L. Heidingsfeld, Cincinnati, and Victor Vecki, San Francisco.

Adjournment.

SECTION ON HOSPITALS

TUESDAY, JUNE 17—AFTERNOON

The meeting was called to order at 2 p. m. by Dr. H. B. Howard, Chairman.

Dr. F. A. Washburn, delegate to House of Delegates was not present, and on motion, seconded and carried, Dr. Joseph B. Howland, Boston, was elected alternate delegate.

Dr. H. B. Howard, Boston, Chairman, read the "Chairman's Address."

Mr. Edward F. Stevens, Boston, read a paper on "The Trend of European Hospital Architecture." No discussion, the Chairman stating that the discussion of all papers would be held at the end of the day's session.

Mr. Richard E. Schmidt, Chicago, read a paper on "Architecture of the Great Charity Hospital."

Mr. L. A. Lamoreaux, Minneapolis, gave an address on "Architecture of the Modern Hospital for Contagious Diseases."

Dr. John Allan Hornsby, Chicago, read a paper on "Equipment of a Small Hospital. Making Over a Dwelling House."

Dr. Herbert C. Cole, Bogalusa, La., read a paper on "Possibilities in the Routine Practice of a Small Hospital."

These five papers were then discussed by Drs. Cleveland H. Shutt, St. Louis; Joseph B. Howland, Boston; E. E. Munger, Spencer, Iowa; John N. E. Brown, Detroit; Richard E. Schmidt, Chicago, and Arthur B. Ancker, St. Paul, Minn.

WEDNESDAY, JUNE 18—MORNING

Dr. Leonhard Felix Fuld, New York, not being present, the Secretary, Dr. John A. Hornsby, Chicago, read his paper on "Selection of Hospital Help under Civil Service Rules." Discussed by Drs. Moses Collins, Denver; Joseph B. Howland, Boston; John N. E. Brown, Detroit; John A. Hornsby, Chicago; Herbert O. Collins, Minneapolis, and Miss Harriet S. Hartry, Minneapolis.

Dr. Rupert Norton, Baltimore, then read a paper on "Municipal Hospitals and Their Relation to the Community." No discussion.

Dr. Herbert J. Hall, Marblehead, Mass., then read a paper on "Hospital and Asylum Work-Shops: Some Possibilities of Handicapped Labor." No discussion.

Dr. E. E. Southard, Cambridge, Mass., then read a paper on "The Psychopathic Hospital Idea." Discussed by Drs. John A. Hornsby, Chicago; Arthur B. Ancker, St. Paul, Minn.; Rupert Norton, Baltimore; Cleveland H. Shutt, St. Louis, and H. B. Howard, Boston.

Dr. Thomas Howell's paper on "Factors Influencing Hospital Costs," was read by the Secretary.

The Secretary then read the report of Dr. Henry M. Hurd, Baltimore, Chairman of Committee on Standardization and Classification of Hospitals. On motion of Dr. Cleveland H. Shutt, St. Louis, duly seconded and carried, the committee was continued as suggested in report.

The papers of the morning were then discussed by Drs. Arthur B. Ancker, St. Paul, Minn.; Cleveland H. Shutt, St. Louis; W. T. Graham, Des Moines, Iowa; John A. Hornsby, Chicago; John N. E. Brown, Detroit, and Mr. W. B. Stratton, Detroit.

Dr. John N. E. Brown, Detroit, moved that a committee on "Outpatients and Dispensary Abuse," be appointed to investigate and report at next meeting, committee to be composed of Drs. Joseph D. Farrer, Philadelphia; Wayne Smith, St. Louis; Joseph B. Howland, Boston; A. R. Warner, Cleveland, and John A. Peters, Providence, R. I. Motion seconded and carried.

Discussion of papers was continued by Drs. John A. Hornsby, Chicago; H. B. Howard, Boston; S. G. Cobb, St. Paul, Minn.; Messrs. W. B. Stratton, Detroit; Edwards F. Stevens, Boston, and Richard E. Schmidt, Chicago.

THURSDAY, JUNE 19—MORNING

The following officers were elected: Chairman, Dr. L. B. Baldwin, Minneapolis; Secretary, Dr. John A. Hornsby, Chicago; Delegate, Dr. Fred A. Washburn, Boston; Alternate, Dr. Joseph B. Howland, Boston.

The Secretary read a paper on "Efficiency in Hospital Nursing" by Dr. W. Gilman Thompson, New York, who was not present. No discussion.

Dr. Richard O. Beard, Minneapolis, read a paper on "The Trained Nurse of the Future." No discussion.

Dr. Joseph B. Howland, Boston, read a paper on "The Nursing Situation as It Is To-day."

The papers were then discussed by Drs. P. E. Truesdale, Fall River, Mass.; Arthur B. Ancker, St. Paul, Minn.; Kate Lindsay, Boulder, Colo.; Cleveland H. Shutt, St. Louis; H. B. Howard, Boston; John A. Hornsby, Chicago; Richard O. Beard, Minneapolis; Misses Louise M. Powell, Minneapolis; Harriett S. Hartry, Minneapolis; Laura Patterson, Minneapolis, and Delia O'Connell, Minneapolis.

Dr. Cleveland H. Shutt, St. Louis, moved that Dr. Louis B. Baldwin, Minneapolis, be elected Chairman; motion was seconded by Dr. Joseph B. Howland, Boston, and carried.

The Secretary then read a letter from Dr. Alexander R. Craig, Secretary.

Dr. Joseph B. Howland, Boston, then moved that Dr. John A. Hornsby, Chicago, be elected Secretary. Dr. John N. E. Brown, Detroit, seconded the motion. Carried.

Dr. Joseph B. Howland, Boston, moved that Dr. F. A. Washburn be elected delegate to House of Delegates and Dr. John N. E. Brown, Detroit, moved that Dr. Joseph B. Howland, Boston, be elected as alternate. Motions seconded and carried.

The Chairman then declared the session closed.

SECTION ON ORTHOPEDIC SURGERY

TUESDAY, JUNE 17—AFTERNOON

The meeting was called to order by the Chairman, Dr. Newton M. Shaffer, New York, at 2:05 p. m.

Dr. Shaffer expressed his regret at being unable to present the paper given for him on the program, owing to circumstances beyond his control, but stated that he had prepared as his Address another paper, entitled "The Orthopedic Surgery of Fifty Years Ago, and Some Reminiscences and Conclusions." He then read this paper. No discussion.

Dr. Wallace Blanchard, Chicago, read a paper on "The New Immigration as It Affects Orthopedic Surgery." Discussed by Drs. Reginald H. Sayre, New York, and Wallace Blanchard, Chicago.

Dr. J. W. Cokenower, Des Moines, Iowa, read a paper on "Infected Joints from Diseased Tonsils and Teeth or Other Diseased Parts of the Body." Discussed by Drs. Henry Ling Taylor, New York; Wisner R. Townsend, New York; F. J. Gaenslen, Milwaukee; Emil S. Geist, Minneapolis; Albert H. Freiberg, Cincinnati; Roland O. Meisenbach, Buffalo; J. D. Griffith, Kansas City, Mo.; Clarence B. Francisco, Kansas City, Mo.; Gilbert L. Bailey, Oak Park, Ill., and J. W. Cokenower, Des Moines, Iowa.

Dr. Henry Ling Taylor, New York, read a paper on "Charcot Joints as an Initial or Early Symptom of Tabes Dorsalis." Discussed by Drs. J. D. Griffith, Kansas City, Mo.; F. J. Cotton, Boston; Gilbert L. Bailey, Oak Park, Ill.; John Ridlon, Chciago, and Henry Ling Taylor, New York.

Wisner R. Townsend, New York, read a paper on "Causes of Error in the Diagnosis of Diseases of the Joints." Discussed by Drs. J. D. Griffith, Kansas City, Mo.; Henry Ling Taylor, New York; E. W. Caldwell, New York; Reginald H. Sayre, New York, and Wisner R. Townsend, New York.

Dr. Emil S. Geist, Minneapolis, announced that Dr. E. G. Abbott of Portland, Maine, would give a demonstration of his principles in applying scoliotic jackets on Wednesday, immediately after the morning session; also that clinics would be given by Dr. Fred H. Albee of New York and Dr. John Ridlon of Chicago, at different hospitals.

Adjourned at 4:20 p. m.

WEDNESDAY, JUNE 18—MORNING

Dr. Leonard W. Ely, Denver, read a paper on "The Employment of Injections in the Treatment of Joint Tuberculosis."

Discussed by Dr. Fred H. Albee, New York; John Prentiss Lord, Omaha; J. D. Griffith, Kansas City, Mo., and Leonard W. Ely, Denver.

Dr. H. Winnett Orr, Lincoln, read a paper on "Results Obtained in the Non-Surgical Treatment of Tuberculosis of the Joints." Discussed by Drs. L. W. Ely, Denver; E. W. Ryerson, Chicago; J. L. Porter, Chicago; Emil S. Geist, Minneapolis; John Ridlon, Chicago; J. P. Lord, Omaha; Arthur Steindler, Des Moines; J. D. Griffith, Kansas City, Mo.; Fred H. Albee, New York; E. A. Rich, Tacoma, Wash.; Willis C. Campbell, Memphis, Tenn.; H. L. Taylor, New York; R. H. Sayre, New York; N. M. Shaffer, New York, and H. W. Orr, Lincoln, Neb.

WEDNESDAY, JUNE 18—AFTERNOON

Dr. F. J. Cotton, Boston, read a paper on "Hip-Fractures; Their Adequate Treatment." Discussed by Drs. John Ridlon, Chicago; J. P. Lord, Omaha; E. W. Ryerson, Chicago; Charles A. Parker, Chicago; R. O. Meisenbach, Buffalo, N. Y.; F. H. Albee, New York; R. H. Sayre, New York; J. E. Moore, Minneapolis; A. H. Freiberg, Cincinnati; Newton M. Shaffer, New York, and F. J. Cotton, Boston.

Dr. Paul B. Magnuson, Chicago, read a paper on "Ivory Plates and Screws as a Means of Holding Fractures." Discussed by Drs. F. J. Cotton, Boston; D. B. Phemister, Chicago; J. P. Lord, Omaha; F. H. Albee, New York, and P. B. Magnuson, Chicago.

The following papers were read as a symposium on Pott's Disease:

Dr. D. B. Phemister, Chicago: "A Study of the Fate of Transplanted Bone and of Detached Fragments in Comminuted Fractures."

Dr. Fred H. Albee, New York: "The Bone-Graft Treatment for Pott's Disease, Ununited Fractures and Certain Deformities."

Dr. John Joseph Nutt, New York: "Observations on the Results Obtained by Operating on the Spine for Pott's Disease."

These three papers were discussed by Drs. John Ridlon, Chicago; H. L. Taylor, New York; E. W. Ryerson, Chicago; A. H. Freiberg, Cincinnati; R. H. Sayre, New York; F. D. Cotton, Boston; D. B. Phemister, Chicago; F. H. Albee, New York, and John Joseph Nutt, New York.

THURSDAY, JUNE 19—MORNING

The election of officers was held, which resulted as follows: Chairman, Dr. Leonard W. Ely, Denver; Vice-Chairman, Dr. Nathaniel Allison, St. Louis; Secretary, Dr. Emil S. Geist, Minneapolis; Delegate, Dr. John Ridlon, Chicago; Alternate, Dr. E. W. Ryerson, Chicago.

Dr. Charles A. Parker, Chicago, read a paper on "Hollow Foot (Pes Cavus)." Discussed by Drs. G. L. Bailey, Oak Park, Ill.; J. L. Porter, Chicago; E. W. Ryerson, Chicago; N. M. Shaffer, New York; John Ridlon, Chicago, and C. A. Parker, Chicago.

Dr. Emil S. Geist, Minneapolis, read a paper on "The Rôle of the Tendo Achillis in the Etiology of Weak Foot." Discussed by Drs. C. A. Parker, Chicago; R. O. Meisenbach, Buffalo, N. Y.; F. C. Test, Chicago; N. M. Shaffer, New York, and E. S. Geist, Minneapolis.

Dr. Edwin W. Ryerson, Chicago, read a paper on "The Surgery of Infantile Paralysis." Discussed by Drs. E. A. Rich, Tacoma; F. J. Gaenslen, Milwaukee; R. O. Meisenbach, Buffalo; Nathaniel Allison, St. Louis, and E. W. Ryerson, Chicago.

Dr. H. W. Freuenthal, New York, read a paper on "The Treatment of the Paralysis of Anterior Myelitis." Discussed by Drs. E. W. Ryerson, Chicago; J. L. Porter, Chicago; R. O. Meisenbach, Buffalo, N. Y.; J. W. Cokenower, Des Moines, Iowa; C. A. Parker, Chicago; A. H. Freiberg, Cincinnati; R. R. Fitch, Rochester, N. Y.; J. P. Lord, Omaha, and H. W. Freuenthal, New York.

Dr. Edward A. Rich, Tacoma, Wash., read a paper on "Criticism of Lange's Silk Ligaments in Paralytic Surgery, and Substitutes Therefor." Discussed by Drs. E. W. Ryerson, Chicago; R. O. Meisenbach, Buffalo, N. Y., and E. A. Rich, Tacoma, Wash.

THURSDAY, JUNE 19—AFTERNOON

Dr. John P. Lord, Omaha, read a paper on "The Whitman Operation for Talipes Calcaneus Paralyticus. Summary of Results in Eighteen Cases. Lantern Slides." Discussed by Drs. Charles A. Reed, Minneapolis; W. C. Campbell, Memphis, Tenn., and J. P. Lord, Omaha.

Dr. R. O. Meisenbach, Buffalo, N. Y., read a paper on "A Consideration of the Fixed Structural Type of Spinal Lateral Curvature." Discussed by Drs. J. L. Porter, Chicago, and R. O. Meisenbach, Buffalo, N. Y.

Dr. H. W. Orr, Lincoln, Neb., read a paper entitled "The Relation of Politics to the State Care of Crippled and Deformed." Discussed by Drs. J. W. Cokenower, Des Moines, Iowa; E. S. Geist, Minneapolis; G. L. Bailey, Oak Park, Ill.; J. J. Nutt, New York; J. P. Lord, Omaha; A. H. Freiberg, Cincinnati; H. W. Orr, Lincoln, Neb., and A. J. Gillette, St. Paul.

Dr. John Ridlon, Chicago, read a paper on "Osteochondritis Dissecans; Report of Three Cases." Discussed by Drs. A. H. Freiberg, Cincinnati; R. T. Vaughan, Chicago; E. S. Geist, Minneapolis; F. J. Gaenslen, Milwaukee, Wis.; A. H. Freiberg, Cincinnati; John Ridlon, Chicago, and J. P. Lord, Omaha.

Dr. F. J. Gaenslen, Milwaukee, Wis., read a paper on "Disarticulation at the Knee-Joint." Discussed by Drs. E. W. Ryerson, Chicago, and F. J. Gaenslen, Milwaukee, Wis.

Dr. E. W. Ryerson, Chicago, moved that a vote of thanks be given to the Chairman and Secretary of the Section for the able manner in which the meeting had been conducted. Seconded and carried.

Dr. S. C. Baldwin, Salt Lake, made a motion that a vote of thanks be given to all who had so elegantly entertained the members while in Minneapolis. Seconded and carried.

Miscellany

The Opportunity before the Medical Profession.—At a recent meeting of the oldest Paris medical society (founded in 1796) Guelpa spoke on the profound transformation which confronts the practice of medicine, and he lifted the curtain for a glimpse into the future. He says that physicians as yet do not realize their power as guardians of health, and their ability to ward off disease and sustain weakly constitutions. It is within our power to protect intelligent and cooperating patients against diabetes, gout, asthma, possibly tuberculosis, etc. The patients should expect to pay the physician regularly as in the past when he was called to the family for an average number of visits on account of sickness, but this regular annual amount paid to the physician should be for his watchful oversight over the members of the family, steering them away from rocks on which they might make shipwreck. The saving to the family in health, comfort, loss of working time and expense will soon convince the public of the enormous advantages of the plan. Instead of being a man of medicine, the physician of the future will be a biologist, and the pharmacist of the future will be a trained physician whose taste is more for laboratory work and biologic analyses. To illustrate his argument, Guelpa tabulated the metabolic findings in five average supposedly healthy individuals. The first is shown by his table to be on the verge of severe derangement from eating too much, and here Guelpa remarked that the cook is responsible for the health of the family far more than is generally recognized, especially by making the food so tempting that one eats for the taste of the dishes after the appetite is satisfied. He asks what the fate of a department store would be if the buyers for the store were allowed to buy constantly, right and left, whatever struck their fancy without regard to stocks already on hand or the outlet through sales. The health of the family lies in the hands of irresponsible cooks ignorant of the first principles

of physiologic requirements. The system is as bad as if 4-year-old children were sent out as the buyers for the big department stores with unlimited credit and no instructions or oversight. The findings in the second table show that the individual is starting diabetes; wisely guided, the tendency may be stopped or kept under control. The third table shows that the individual is throwing off excess amounts of minerals; this suggests that the soil is being prepared on which tuberculosis develops by preference; it is easy at this stage to modify the soil back to normal conditions. The fourth table gives the findings in a case of eczema and one of urticaria; in both the output of nitrogenized elements was far below normal while that of non-nitrogenized elements was far above. The diet was then regulated to increase the proportion of nitrogenous elements and reduce the intake of the non-nitrogenized, and the eczema, which had previously resisted all measures, rapidly subsided. The waste from the excessive non-nitrogenized elements had evidently been mainly responsible for maintaining the eczema, as the diet had been restricted to milk, vegetables and carbohydrates. Changing the dietetic restrictions to the opposite was speedily followed by a complete cure. Guelpa adds that the transformation of the practice of medicine along the lines of biology is the logical application of the progress in the medical sciences of recent years. The task thus set before us is beyond question the most exalted, the most delicate and the most useful of all social missions. His article is published in the *Bulletins de la Société de Médecine de Paris*, 1913, p. 401.

Suitable Employment for Epileptics.—Dr. Matthew Woods, in the Philadelphia *Public Ledger*, calls attention to the frequent automobile and other accidents occasioned by the employment of epileptics. He recites a number of instances of such accidents from his case books in which not only the lives of the individuals themselves, but also the lives of others were jeopardized by sudden attacks of epilepsy in the afflicted person. As instances of the unwise employment of epileptics, he mentions the case of a painter who fell while working on a high scaffold, and a coachman with petit mal who on three occasions nearly caused the death of three different employers and their families, and in a fourth instance almost killed himself and his employer by an accident in which the carriage was smashed. In another instance a chauffeur was killed in an accident during an attack. He had previously never had anything but nocturnal attacks. Another person was caught in a belt in a machine-shop and fatally injured. A barber in a sudden convulsion almost cut off the nose of a customer. In another instance an epileptic nurse, in a convulsion, fell down stairs with a child in her arms, which resulted in crippling the child for life. Other instances of unsuitable occupations are those of stationary and locomotive engineer. The employment of epileptics in positions which require the most constant and alert attention such as those of chauffeur or engineer, or in occupations which subject them to the hazard of dangerous positions or proximity to machinery should of course never occur; yet it is necessary that these persons should be provided with suitable occupations. Dismissing epileptics into idleness is not a protective measure, for they may do more damage than when suitably employed. While not all epileptics are curable, it is recognized that occupational activities in safe places constitute an important factor in their treatment and care.

Necessity for Cultivating Skill in Clinical Diagnosis.—The modern, up-to-date physician has seen many mechanical appliances and expert chemical processes evolved and perfected for purposes of accurate diagnosis, all of which are extremely valuable additions to the doctor's armamentarium; but in no wise should they supplant the acquirement and cultivation of the delicate touch so essential in the palpation of a cardiac thrill, a vocal fremitus or a bone crepitus. The unaided ear should still be able to discriminate and differentiate the delicate and characteristic pneumonic sounds in a mediate auscultation; the eye, aided only when needed by a corrective lens for its refractive error, should appreciate and interpret a peristaltic wave, a latent convergent squint, or a decubitus characteristic of pneumonia; and even the olfactory sense organ should be so expert that a characteristic odor of an intestinal perforation during a laparotomy, a secluded case of small-pox, or a sapremic puerperal infection may be opportunely recognized. In short, this sense perception of the physician should be so acutely developed and trained that these complementary adjuncts will not have to be wholly relied on, and were this expert training of the sensorium carried into daily practice there would be fewer failures in diagnosis and fewer quacks now in operation. Yet, who will doubt the practical utility of a well-equipped clinical laboratory? The physician's own private laboratory facilities should consist of more than the traditional rack of dirty test-tubes. A microscope with slides and other equipment for making smears, a blood-counting apparatus with a hemoglobin scale, an apparatus for stomach analysis, a bedside Widal, a centrifuge, a blood-pressure apparatus and even an ophthalmoscope and a cystoscope are articles deserving of as prominent a place in a physician's equipment as a stethoscope and a clinical thermometer.—Clinton E. Spicer, M.D., in North Dakota State Med. Assn.

Hygiene and Decency: or Sentiment in Sanitation.—Travelers may often see in railway carriages in Italy the notice—*Per Igiene e Decenzia non Sputare*. (For Hygiene and Decency do not Spit.) There is here a lesson for sanitarians. Dirt is not always deadly or even dangerous, and those who teach that dirt is necessarily disease-producing will find difficulty in explaining the often long-continued and robust health of workers in sewers or on streets or about garbage-piles or in stables or dusty trades. . . . The fact is that sentiment—doubtless fortunately—still plays a mighty part in the world, and that the public is, and ought to be, glad to pay for decency as well as for safety in food and drink. The moral is obvious. . . . Teachers of hygiene and sanitation should not forget to enforce the idea that these sciences stand for cleanness hardly less than for disease prevention. Some cities with dirty streets very likely have lower death-rates than some with clean streets; some families in dirty homes less sickness than some in clean ones; and yet it does not follow that cleanness is superfluous. Fire and death very likely do not occur any less often among the insured than among the uninsured, but when they do occur the insured are better off, and this is probably the basis of the general opinion of mankind that both fire-insurance and life-insurance are worth while. It is very likely for some such reason as this that public opinion requires cleanliness—an opinion which like many other opinions has finally become a sentiment; for cleanliness is a kind of insurance—not always sufficient to prevent disease but always worth while.—*American Journal of Public Health.*

Effect of Belt Constriction on Hunger.—Investigations were undertaken by Prof. Dr. Rudolf Lennhoff, as reported in the *Vossische Zeitung*, to ascertain in what manner constriction about the body in the region of the stomach lessens hunger, which is a plan sometimes followed by hungry tramps and others. Metallic substances were mixed with solid food, such as potatoes, and fed to men. The *x*-ray revealed that a contraction of the stomach took place and a relatively small quantity of the food proved sufficient to satisfy the appetite. When liquid food was given, the contraction was considerably less and a larger quantity was necessary for satiation. Another experiment in which the liquid food was introduced through a tube showed that twice the quantity was required to produce satiety. The conclusion was that the stimulus of swallowing by reflex action caused contraction of the stomach and produced a lessened sense of hunger. This suggested that artificial pressure over the stomach by means of a belt, as in the case of the tramp, produced the effect and this proved to be the case. In order to eliminate the effect of suggestion, the experiment was tried on insane persons who were allowed to eat as much as they pleased; during the experiment they ate less. The conclusion is that the sense of satiety is influenced by the act of swallowing which causes contraction of the stomach.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 DEARBORN AVENUE . . . CHICAGO, ILL.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

SATURDAY, JULY 5, 1913

THE FATE OF INGESTED PROTEIN

Although the form in which protein is absorbed from the lumen of the intestine is fairly well understood, the fate of the products of its alimentary breakdown is by no means so clear. Recently we referred to some of the experimental evidence on the travels of the amino-acids in the circulation to the tissues and their ultimate conversion to urea.[1] Quite irrespective of the form in which the nitrogenous material is conveyed to the tissues, the speedy occurrence of an increased elimination of nitrogenous substance in the urine after a meal of protein is undeniably suggestive that somewhere there is a prompt disintegration of nitrogen-yielding compounds. It is by no means necessary to assume that the post-prandial increase of urinary urea is derived directly from the material ingested at the meal, for it is also conceivable that the nitrogenous waste arises from the breakdown of effete protoplasm which is discarded when a new supply of repair material is available. Some physiologists have maintained in the past that ingested protein must be built up into tissue products before it is again catabolized. Pflüger, for example, contended that the food protein must first become an integral part of the living protoplasm before it can be utilized.

If it were true that the absorbed food protein, unlike the living tissue protein, is not readily catabolized, one would be obliged, in view of the undisputed rapid rise in the output of nitrogen in the urine after a meal, to assume an extraordinarily rapid synthetic process followed at once by an equally rapid disintegrative change to account for the known phenomena. Protein contains both nitrogen and sulphur, and these elements exist in certain relations to each other in the typical albuminous compounds. This fact makes it possible to determine with some probability whether the urinary end-products are really derived from degraded tissue or from unsynthesized amino-acids speedily distributed in the organism after their absorption. If it be the former, then the excreted material ought to bear some definite percentage relationship to the normal protein of the body; for example, the ratio of sulphur to nitrogen in the urine should approximate to that of the average tissue as obtained by the study of the sulphur and nitrogen ratio in complete starvation when the tissues alone furnish the catabolites.

Data lately presented by Drs. Cathcart and Green[2] of Glasgow University offer added evidence that the rise in the output of nitrogen and sulphur after a protein meal is due to the catabolism of the actual material ingested. The sulphur-containing moiety of the protein after ingestion is, as a rule, more rapidly catabolized and the sulphur more rapidly excreted than the nitrogen. The S : N ratio in starvation, when all of these elements excreted must come from an endogenous source, is about 1 : 15. After the ingestion of egg albumin (with a S : N ratio of 1 : 8), the urine ratio was found to be 1 : 9.8. This would scarcely be expected if it were organized tissue protein that furnished the urinary constituents. Perhaps, in order to obtain a true picture of the protein exchange in the body, it will be necessary hereafter to consider the fate of the sulphur as well as the nitrogen in the excretions.

1. The Mechanism of Protein Assimilation, editorial, THE JOURNAL A. M. A., May 17, 1913, p. 1546.

PUBLIC HEALTH LEGISLATION IN ALASKA

Health conditions among Alaskan natives and residents have been the subject of much-needed consideration of late. THE JOURNAL has noted from time to time the results of special surveys of the prevalence of disease in Alaska and has urged that effective measures be adopted to combat preventable disease in this territory. Such measures should embrace provisions for sanitary oversight of all communities, for compulsory sequestration of contagious diseases, for a quarantine system against the introduction of epidemic diseases from without, for hospital care of selected cases, especially of tuberculosis and trachoma, for popular education in personal and public hygiene and for the collection of vital statistics. An Alaskan board or commissioner of health is needed with sufficient assistants and ample appropriations.

Realizing the need of such action, the Governor of Alaska took up the question of federal supervision of public health measures with the federal authorities at Washington. It was suggested by the Secretary of the Treasury on April 19 that the Alaskan territorial legislature should enact a proper health code and make appropriation for its enforcement. The secretary gave assurance of federal maintenance of maritime and border quarantine, and of federal provision for such measures as might be necessary to prevent the spread of cholera, typhus, yellow fever, small-pox and bubonic plague in the interior of Alaska. The national government would also cooperate with the territorial government in the control of other contagious and infectious diseases.

In accordance with these suggestions, there has been introduced into the house of the Alaskan territorial legislature a bill[1] to provide for the registration and

2. Cathcart, E. P., and Green, H. H.: The Rate of Protein Catabolism, Biochem. Jour., 1913, vii, 1.

1. House Bill 80, Territory of Alaska, first session.

restriction of communicable diseases in Alaska. This bill constitutes the governor ex-officio commissioner of health and empowers him to designate a licensed physician in each judicial district as assistant commissioner of health. The commissioner is to have general supervision over the interests of health and life in the territory. He is authorized to make all necessary quarantine regulations, to provide for the disinfection of infected premises, and the removal of dead bodies, rubbish, garbage and other things inimical to health preservation. When necessary he is to consult with federal officers on matters pertaining to sanitation and hygiene.

The act will make each school district a health district with its own board of health, to be composed of the president of the school board, and two citizens chosen by the school board, of whom, whenever practicable, one shall be a licensed physician. In native villages any representative of the United States Bureau of Education shall have the authority and powers granted to local boards of health. An important section relates to the definition of communicable diseases. Exposure or infection of person or articles with the following diseases renders them subject to the provisions of the act: plague, cholera, small-pox, yellow fever, typhus, typhoid, leprosy, scarlatina, measles, diphtheria, infantile paralysis, cerebrospinal meningitis, erysipelas, whooping-cough, glanders and mumps. In addition all cases of pulmonary tuberculosis and trachoma, when the usual precautions against spreading the disease to others are wilfully neglected, and when other persons are liable to become infected because of this negligence, are to be considered capable of conveying contagious or infectious disease. The diseases here enumerated are made subject to notification within twenty-four hours of their discovery.

This bill marks a long step of progress in the sanitary and hygienic history of Alaska. Its passage should be hastened and supported by ample appropriation. The territory of Alaska is now entering on a new era of substantial development which requires fundamentally adequate provision for the control and maintenance of the public health.

THE BACTERIA IN EGGS

There can be no doubt that the contents of fresh eggs are at times perfectly sterile. It was this fact that enabled Schottelius, in his now classic experiments on life without bacteria, to hatch chickens under sterile conditions and keep them free from micro-organisms in a sterile atmosphere with sterile food and drink. It is equally true that fresh eggs from apparently healthy hens may contain bacteria; and according to the investigations of Rettger at Yale University it is now demonstrated that the organism causing the white diarrhea of chicks, *Bacillus pullorum*, is transmitted in the egg itself. The questions of how frequently, where and in what manner eggs become containers of bacteria are of serious import in relation to the food industry. On the knowledge of these matters the success and the technic of the preservation of eggs for purposes of food must ultimately rest. If organisms commonly enter the egg during its passage down the oviduct of the fowl we are face to face with a source of bacterial contamination with which we cannot cope directly. If it be demonstrated, on the other hand, that the bacterial invasion of the shell takes place at the time of laying or that the penetration by micro-organisms comes subsequently, preventive or palliative measures can be planned more intelligently and effectively.

Several years ago Dr. Pennington of the U. S. Department of Agriculture reported an elaborate study of fresh eggs of known history and examined from the bacteriologic point of view.[1] Her findings indicate that organisms are usually to be discovered in both the yolk and white. Only 12 per cent. of all the eggs examined were sterile when tested. There were minor variations in respect to the incidence of season, breed and fertilized and unfertilized specimens which need not concern us here. What is more significant is the great array of species to which the egg organisms belonged—thirty-six species in the hundred eggs from which the varieties were isolated. Molds and yeasts were not missing.

Kossowicz[2] of Vienna has not been content with these findings, which he regards as unjust to the inherent sterility of really fresh hen's eggs. By way of critique he remarks on the dangers of air contamination incident to the manipulations in investigations of this sort. Such charges would have little weight except for the fact that the Austrian bacteriologist himself has found that fresh eggs are as a rule free from bacteria. They are, however, very easily invaded by micro-organisms of the most objectionable character within comparatively brief periods. This is true despite the protective shell which encloses the putrescible parts; it is particularly true under the conditions of careless handling and transportation in the trade. Not merely bacteria, but yeasts and molds as well can find their way through the intact shell and membranes of the egg with comparative ease. According to Kossowicz old eggs are invaded with greater ease than are fresh ones; and the spilled contents of spoiled eggs furnish a peculiarly effective agent for the penetration of others contaminated by them.

As a mode of preserving eggs the cold-storage process easily ranks first. If it is true that as a rule freshly laid eggs are sterile, every inducement to avoid sources of bacterial contamination as far as possible is offered to those who wish to conserve them in perfect condition. Cleanliness in handling must be an important feature. When the effective method of preservation by low temperature cannot be applied, the use of solutions of lime and especially of sodium silicate or water-glass, deserves primary consideration. These processes, applicable in the home itself, are beginning to be widely advertised and appreciated in this country.

1. Pennington, M. E.: A Chemical and Bacteriologic Study of Fresh Eggs, Jour. Biol. Chem., 1910, vii, 109.
2. Kossowicz, A.: Die Zersetzung und Haltbarmachung der Eier, J. F. Bergmann, Wiesbaden, 1913.

EXPECTATION OF LIFE

So much has been said in recent years about the saving of life by the development and enforcement of sanitary regulations, especially by the gradual but steadily progressive reduction in the death-rate from infectious diseases of all kinds, and above all those from which children suffer, that it is well to know exactly how the expectation of life has been modified during the last three or four decades while our sanitation has been undoubtedly advancing in efficiency. The opportunity for the study of comparative mortality at different periods of life and of expectation of life is afforded by the publication of a life-table by the department of health of New York City, a preliminary report of which occurs in the *Weekly Bulletin* of the department for May 31, 1913. A life-table, according to the dictionary, is "a statistical table showing the number of people, out of a given number, that will probably reach different ages," and this is the first time that the New York City Department of Health has prepared such a document. It is all the more interesting because it permits a comparison with the results of a similar document prepared under the direction of the late Dr. John S. Billings in 1882 for the federal census. That table was based on the mortality statistics for the triennium 1879-1881. The present table takes the same statistics for the corresponding three years 1909-1911, inclusive, just thirty years later.

In New York City a child under 5 years of age had an expectancy of life thirty years ago of forty-one years. A child of the same age at present may look forward to living on the average fifty-two years, an increase of eleven years. The expectancy of life has increased much less for each of the succeeding five-year periods. The life of a child between 5 and 10 years has now an increase of expectancy of only five years more than was the case thirty years ago. As the age increases, the expectancy of life at present grows more nearly equal to that of thirty years ago. An adult aged from 25 to 30 years had an expectancy three decades ago of about 32.6 years, while at present the expectancy of life at this age is 34.3 years, an increase of only 1.7 years. With the attainment of the age of 40 the situation is reversed and the expectancy of life is actually less than it was a generation ago. Persons between 40 and 45 years of age had an expectancy of life of 23.9 in 1882, and at present have only 23.4 years to look forward to —a decreased expectancy of six months.

The present New York life-table further shows that there is a constant diminution of life expectancy from the fortieth year onward. This is not very great, however, for even at the age of 85 years the expectancy of life at present is only three years and three months less than it was thirty years ago. This increased mortality in recent years during the fifth decade of life and later is ascribed to the greater prevalence of cancer and diseases of the heart and kidneys. The so-called degenerative diseases take more victims than before. The death-rate from the infectious diseases has been greatly lowered, and children's and young persons' lives are thus saved, but many of these young people who are now kept in life lack resistive vitality to degenerative processes or fall victims after 40 to the terminal conditions consequent on the failure of important organs to maintain their efficiency. The New York life-table also attributes the increased mortality after middle life to the greater consumption of spirituous liquors and of nitrogenous articles of diet than were commonly used even a generation ago. The wear and tear of the strenuous existence of modern city life, particularly associated with insufficient physical exercise in the open air, are also made responsible for some portion of the increase in mortality.

There is a distinct difference between the expectancy of life among males and females. On the whole this is greater among females than among males before 40 years of age, while after 40 the reverse is true. During the past three decades the increase in the expectancy of life has favored females before 40, but has been against them after that time. "Among males at all ages the increased expectancy of life up to 40 years of age amounts altogether to almost twenty-five years, while among females it amounts to twenty-nine years. After the beginning of the fifth decade, however, diminished expectancy of life among males is fifteen years and among females eighteen years."

The most important results from advancing sanitation are found among the very young. At all times up to 40, however—and as a rule a good deal of men's best work is accomplished by that time—there are a greater number of people living for the number born than ever before. The increased mortality from 40 years of age on adds a good deal to the world's suffering because between 40 and 60 men are of much more importance to those around them, and there is much more of serious loss because of their deaths; but on the whole there is a distinct gain to be chronicled.

ACID DIABETES

The term "mobilize" has begun to find an application in physiology. Originally used to express the preparation of an army for active service, mobilization is at present also made to indicate the process of starting various body components on their physiologic road. Thus it has come about that one reads, for example, of the mobilizing of uric acid, or of carbohydrates. As so often happens, a suitable euphonious word is made to cover the uncertainties of current information. Undoubtedly, however, there are numerous conditions under which the glycogen stores of the organism are mobilized. In consequence they furnish readily available sugar for distribution to the tissues if sugar is needed. When the mobilization exceeds the actual call for carbohydrate in metabolism and when it is provoked by abnormal occasions, the excess may give rise to

hyperglycemia and glycosuria. Here we enter the domain of the pathologic.

The theories to account for the excessive formation of sugar through what may be termed the "mobilization" of glycogen are legion. They bring us into the field of diabetes with its etiologic uncertainties and perplexing problems. Perversions in the functions of the ductless glands have been held to account for many of the phenomena; but such assumptions do not remove the veil of obscurity. Anatomic lesions or chemical compounds always convey a clearer impression of pathologic possibilities than does the mention of "functional" disturbances, though in ultimate analysis the latter must rest on physical or chemical factors. Hence there is something seemingly concrete and definite in the idea of an "acid diabetes" which has been formulated in von Noorden's clinic at Vienna.[1] It is based on experiments in which acids were introduced into the circulation of animals and the effects on various carbohydrate factors noted. Even small quantities of acid suffice to "mobilize" glycogen, liberating it from the liver in very considerable amounts, with hyperglycemia and glycosuria as a result. It appears as if the adrenals, usually given a prominence in the genesis of such conditions, were not immediately involved in this diabetic upheaval.

There are conditions of disturbed metabolism in which acids are known to arise in the organism. Consequently the possibilities brought out by these purely experimental devices may experience an actuality under readily conceivable pathologic conditions. This is not the first time that the acid products of intermediary metabolism have been called on to function as regulators of physiologic processes.

Current Comment

MEDICINE LEADING IN EDUCATIONAL PROGRESS

A bulletin[2] issued recently by the United States Bureau of Education contains an interesting chapter on the standards of medical schools. After a brief history of these standards prior to 1900 the bulletin says: "A phenomenal fruition has come, however, in the last half dozen years, due chiefly to the conferences and work of the Council on Medical Education of the American Medical Association. . . . No more marvelous chapter in the history of educational standards can be found than in a review of the work of these conferences as shown by the report for the first five years." Further the bulletin says: "The practical bearing of medical education on the life and death of mankind has made its development and coordination with general education more than an academic question and has accelerated the movement for the solution of several educational problems. It has made clear that the detached professional school must become an integral part of a university, that commercialism . . . must be displaced and that educational institutions must be supplemented by the state in medical practice acts and expert examining boards. The advances of science and of medicine by which medicine is the application of science . . . to the prevention and cure of disease, have made such drafts on the time of the student and so added to the cost of instruction, that a reorganization of education outside medicine from the bottom to the top has been demanded." It is apparent, therefore, that the largely attended educational conferences conducted by the Council on Medical Education and the wide publicity given by THE JOURNAL to the reports of these conferences and to educational statistics collected from various sources, have not only produced remarkable improvements in medical schools but also have exerted a strong influence toward the solution of problems in other lines of education. The work of the Council in inspecting and standardizing medical schools has doubtless led to the efforts now being made toward standardizing colleges of liberal arts and universities. Surely it is time accurate information should be available regarding the actual conditions under which all degrees in this country are granted. Even in this "land of the free and home of the brave" conscienceless educational institutions should not be given unlimited license to peddle out degrees at so much each, or without requiring a reasonable minimum of knowledge for those degrees and the public should have the right to know for each institution what that minimum is. In its campaign for better medical schools, the American Medical Association has shown how results are to be obtained—first, by thorough investigation and second by giving extensive publicity to the conditions found.

THE FUNCTION OF THE BILE

The alimentary functions of the bile, once a theme for prolonged debate in physiology, have ceased to arouse polemic interest. The recent advances in the study of digestion have served to elucidate the uses of the secretions poured into the gastro-intestinal tract to such a degree that every medical student of to-day can gain a clear-cut conception of the part which they play. The relationship of the bile to the absorption of the products of fat digestion is thoroughly appreciated, particularly owing to numerous studies of the events which follow the failure of this hepatic secretion to enter the digestive tube. Ingested fat then fails to be utilized properly; but the absorption of the other food derivatives is affected only in so far as the presence of the residual insoluble products of fat digestion inhibits the appropriate digestion of the accompanying nutrients and mechanically interferes with their transport into the blood-stream. Observations of patients having a complete biliary fistula have repeatedly borne out these statements. So long as an excess of fat in the diet is avoided, the nutritive functions appear to proceed satisfactorily even in the absence of the bile. If further proof were needed it could be found in the interesting report of Dr. Parker's case of a child aged 4 years, with complete

1. Elias, H.: Ueber die Rolle der Säure im Kohlenhydratstoffwechsel, Ueber Säurediabetes, Biochem. Ztschr., 1913, xlviii, 120.
2. MacLean, George Edward: Present Standards of Higher Education in the United States, Bull. 4, 1913, U. S. Bureau of Education.

absence of the bile from the intestines.[1] The careful metabolism experiment conducted in connection with the case clearly demonstrates that a child, not otherwise ill, but unable to digest fat for the reasons advanced, can, if gastric and pancreatic functions are normal, digest sufficient protein and carbohydrate to induce gain in weight as well as maintain a favorable nitrogen balance. The facts reported are doubly valuable because they were obtained during the period of vigorous growth in childhood when the nutritive demands are always pronounced and the failure to meet them usually provocative of symptoms of retardation. Favorable results are obtainable, however, only when the alimentary annoyance of unutilized fat is avoided by a corresponding exclusion of this group of foodstuffs from the diet.

REGULATION OF INTERSTATE TRAFFIC IN MILK

At a meeting last February of the governors of the middle and eastern states, resolutions were adopted which aimed to inaugurate action by the several states to secure uniform regulations regarding milk shipped from one state to another. In New York the milk bills drawn in accordance with these resolutions were defeated in the legislature. The bills were intended to supplement each other, one providing that the state department of agriculture should have charge of dairy inspection, employing the veterinarians in the department as inspectors, and the other that the state department of health should have charge of the medical inspection of dairy employees and the laboratory tests of milk, water-supplies on dairy farms, etc. The bills were introduced at the instigation of the Milk Committee of New York City, which city is most vitally interested in the interstate milk-supply, as it receives milk from all the states represented at the conference. The question of the interstate shipment of milk is one that affects many cities, and uniform regulations in regard to production, inspection and shipment would seem to be most desirable.

THE PATHS OF ABSORPTION FOR AMINO-ACIDS

Whenever improved methods of research or new discoveries in science alter long-accepted opinions and bring new points of view into the field, revision becomes the order of the day. It is not alone our text-books and our teaching that must be adapted to the new situations or altered to include the latest contribution; much that is older and apparently based on firm foundations of knowledge must be inspected anew with refined procedures to see whether, after all, there is no detectable defect or hidden secret. Therefore, when it became apparent that amino-acids, once believed to be foreign to the blood-stream, are transported to the circulation from the alimentary tract after every protein meal,[2] when the physiologist became trained to search for amino-acids as intently as he looked for proteoses and peptone a few years ago, it seemed desirable once more to explore the various paths of absorption. The two direct ways for the entry of absorbed alimentary products into the blood-stream are the portal circulation and the lymphatics. It has long been conceded that of all the foodstuffs the fats alone enter by way of the lymph-channels. In the light of the experience gained in recent years the lymph has again been subjected to careful chemical analysis in experimental animals after liberal protein feeding.[2] As a result of the newer investigations there is no occasion to revise the current view. The amino-acids which leave the digestive tube do not travel along the lymphatic paths on their way to the seats of metabolic activity in the organism.

1. Parker, W. S.: Metabolism of a Child with Complete Absence of the Bile from the Intestines, Am. Jour. Dis. Child., May, 1913, p. 386.

2. A New Theory of Protein Metabolism, editorial, THE JOURNAL A. M. A., Sept. 14, 1912, p. 880; The Mechanism of Protein Assimilation, editorial, THE JOURNAL A. M. A., May 17, 1913, p. 1546.

2. Abderhalden, E., Lampé, A. E., and London, E. S.: Weitere Untersuchungen über das Schicksal der im Darmkanal sich bildenden Eiweissabbaustufen, Ztschr. f. physiol. Chem., 1913, lxxxiv, 213.

Medical News

KANSAS

Health Board Inspects Hotels.—The report of the Kansas Board of Health regarding hotel inspection shows that 1,288 hotels were inspected during the year. Of these, 838 were licensed, 450 were not given certificates and of the latter 70 were ordered closed.

New Officers.—McPherson County Medical Society organized at McPherson, May 10: president, Dr. L. A. Bradbury, Galva; secretary, Dr. G. R. Dean, McPherson.——Atchison County Medical Society reorganized at Atchison, May 5: president, Dr. M. T. Dingess; secretary-treasurer, Dr. E. T. Shelly, both of Atchison.

Personal.—Dr. James E. Sawtelle, Kansas City, has succeeded Dr. F. A. Carmichael, Goodland, as a member of the Medical Board of Examiners and Registration.——Dr. Lyman L. Uhls, superintendent of the Kansas City Hospital, Osawatomie, has resigned and will open a private sanatorium at Oberlin Park, near Kansas City. Dr. F. A. Carmichael has been appointed his successor.

MARYLAND

Donation for Maternity Department.—Mrs. Alfred J. DuPont, Wilmington, Del., has donated the money necessary to establish a maternity department in connection with the Cambridge (Eastern Shore) Hospital. It will be known as the DuPont Maternity Hospital. The building will be of brick and stone construction and three stories in height.

MICHIGAN

New Officers.—Wayne County Medical Society at Detroit, May 19: president, Dr. Louis J. Hirschman; secretary, Dr. Raymond L. Clark.——Detroit Society for Sex Hygiene, May 23: president, Dr. Rollin H. Stevens; secretary, Raymond E. Van Syckle.

Personal.—Dr. Morley S. Vaughan has been appointed physician to the State Penitentiary, Jackson, vice Dr. George R. Pray, resigned.——Dr. Lincoln P. Parkhurst, wife and daughter, Grand Rapids, have started for Europe.——Dr. A. B. Cornell, Kalamazoo, is reported to be critically ill in Borgess Hospital.

MISSOURI

New District Society Organized.—Physicians of Clark, Scotland and Schuyler Counties organized the Fifth District Medical Association at Memphis, June 24, and elected the following officers: president, Dr. A. E. Platter, Memphis; vice-presidents, Drs. B. B. Potter, Lancaster, and W. B. Sisson, Kahoka; secretary, Dr. E. E. Parrish, Memphis, and treasurer, Dr. E. L. Mitchell, Lancaster.

St. Louis

Hospital Camps for Babies.—Women interested in St. Luke's Hospital are arranging to open hospital camps for sick babies at Missouri Avenue and Charlotte Street and Madison Avenue and Seventeenth Street. Each camp will have a physician and graduate nurses in constant attendance and a visiting

nurse on duty. Last summer 119 patients were treated at the camps and 740 visits were made by the visiting nurses connected with them.

NEW YORK

Must Report Additional Industrial Diseases.—The New York State Department of Labor has sent an official notice to physicians requiring them to report two additional industrial diseases, namely, poisoning by brass or by wood alcohol. There are in all eight diseases which must now be reported to this department, namely, lead poisoning, phosphorus, brass arsenic, wood alcohol and mercury poisoning, anthrax and caisson disease.

Health Council Named.—Governor Sulzer has announced the personnel of the Public Health Council which, under the new health law, will establish sanitary regulations. The members are: Dr. Hermann M. Biggs, New York, chairman; Dr. Simon Flexner, Director of the Rockefeller Institute for Medical Research; Henry N. Ogden of New York, a sanitary engineer; Homer Folks, Secretary of the State Charities Aid Association; Dr. Edwin Clark, Buffalo, and Mrs. Elmer Blair, President of the Women's Club of Albany.

Criticism of the County Tuberculosis Hospitals.—The May *Bulletin of the New York State Department of Health* makes a comparison of German hospitals for tuberculosis and those in this state and points out that none of our county hospitals is equipped with laboratories, that a resident physician is not the rule, nor does it appear that the physicians in charge have any particular training for the care of cases of tuberculosis. The question of diet which receives a great deal of attention in foreign countries does not appear to be regulated according to any system. There is also a lack of proper provision for regular and systematic examination of the physical condition of the patients. The report states that if victims of tuberculosis are to be encouraged to become inmates of a public hospital, it should be a *sine qua non* that they should be able to find there the most advanced care and treatment known to medical science. In connection with this subject of tuberculosis hospitals, it may be noted that the new Public Health law provides for the establishment of workshops in connection with such hospitals, such workshops to be under the direction and control of the municipal authorities having direction and control of the sanatorium to which they may be attached.

New York City

New York Dispensary to Move.—The New York Dispensary, which has been in continuous operation for 122 years and has cared for 3,750,000 patients in that time, has been obliged to move from its quarters at 145 Worth Street and will be housed in a new building in process of erection at 34 and 36 Spring Street.

Cancer Bequest Contested.—The bequest of $200,000 to the Rockefeller Institute for the study of cancer by the late Henry Rutherford is in danger. Notice has been filed in the surrogate's court that the will will be contested by cousins of the deceased, who allege that Mr. Rutherford was of unsound mind when he signed the will.

Dedicate Seaside Hospital.—The new main building of the Seaside Hospital of St. John's Guild at New Dorp, Staten Island, was dedicated on June 12. The building was erected at a cost of $150,000 and can accommodate 400 patients. Dr. Abraham Jacobi, president of the Medical Board of St. John's Guild, was one of the speakers at the dedication.

Health Exhibits Popular.—It is stated on the authority of Frank H. Mann, Secretary of the Committee on the Prevention of Tuberculosis, that more than 22,000 persons witnessed the moving picture shows given in the parks during the second week in June to teach the public how to fight the ravages of tuberculosis. The exhibits thus far have been so successful that plans are being made to give many more during the summer.

Personal.—Drs. Charles White, Berry, Max G. Schlapp and Denis Alois McAuliffe have been appointed examiners of mentally deficient children under the new law.——Dr. and Mrs. William J. Robinson, Dr. and Mrs. Worthington Seaton Russell, Dr. Howard Canning Taylor, Dr. H. L. Schelling, Dr. M. J. Peebles, Dr. and Mrs. Clement Cleveland, Dr. Newton M. Shaffer, Dr. James Ewing, Dr. William H. Rockwell and Dr. J. A. Campbell have sailed for Europe.

Test Milk Used in Schools.—The New York Milk Committee has just made a report on the results of an investigation as to the character of the milk supplied to schools, colleges, etc. The report states that the methods used in these institutions for handling milk are of the best known, and that the quality of the supply is above the average for public use. The investigation included the supply of four colleges, twenty-nine high schools, four training and vocational schools and six private and special schools.

Infant Mortality.—For the week ended June 21 there were 208 deaths of infants under one year of age, a decrease of 21 from the previous week and of seven from the corresponding week of last year. The Babies' Welfare Association has sent out 35,000 leaflets to mothers in the tenements telling them how to war against flies and dirt. The enrolment at the milk stations is increasing at the rate of 300 infants a week. There are now 76 milk stations in operation with a total enrolment of 13,000 babies.

Plan New Hospital.—The Sisters of Charity of St. Vincent de Paul have filed plans for a new hospital building to be known as Laurence Hospital, to be situated on the left side of Edgecombe Avenue between One Hundred and Sixty-Third and One Hundred and Sixty-Fourth Streets. The building will have a frontage of 228 feet, 304 feet on One Hundred and Sixty-Third Street and 115 feet on One Hundred and Sixty-Fourth Street. The building will be six stories high and it is estimated that the cost will be $500,000.

School Ventilation Criticized.—The committee on school inquiry of the Board of Estimate have reported that the open window system of ventilation is not conducive to health or proper regulation; that the present mechanical method of ventilation is harmful, even more so than the primitive open window method; that the latest mechanical ventilation systems should be installed in school buildings; that where ducts cannot practically be installed individual devices be used to sterilize, humidify, wash and temper the air, and that more money and time be applied to carry on the investigation. Some other conclusions were that overheated and overmoist air was the principal cause of discomfort and injury to health in ill-ventilated rooms.

Rockefeller Institute Appointees.—The Board of Scientific Directors of the Rockefeller Institute for Medical Research announce the following appointments and promotions: Drs. James Bumgardner Murphy and Martha Wollstein, assistants in pathology and bacteriology, have been made associates; Dr. Wade Hampton Brown has been made associate in pathology and bacteriology; Dr. Carroll G. Bull, assistant in pathology and bacteriology; Dr. Fred Lamont Gates, fellow in physiology and pharmacology. Dr. G. Canby Robinson, formerly associate in medicine, has been appointed associate professor in medicine at Washington University, St. Louis; Dr. Jacques J. Bronfenbrenner, formerly assistant in pathology and bacteriology, has been appointed a director of the pathology laboratory of the Western Pennsylvania Hospital, Pittsburgh, and Dr. Richard Vanderhorst, Lamar, formerly associate in pathology and bacteriology, has been appointed professor of pathology in the University of Georgia, Augusta.

NORTH CAROLINA

Personal.—Dr. F. O. Hawley has been reelected health officer of Charlotte and Dr. H. L. Leinback has been appointed assistant to the medical health officer.

State Board Election.—At the annual meeting of the State Board of Medical Examiners held in Morehead City, June 11-18, Dr. John Bynum, Winston-Salem, was elected president and Dr. Benjamin K. Hayes, Oxford, was reelected secretary-treasurer of the board.

State Health Officers' Meeting.—At the annual meeting of the North Carolina State Health Officers' Association held in Morehead City, June 16, under the presidency of Dr. L. N. Glenn, Gastonia, Dr. R. H. Lewis, Raleigh, formerly secretary of the State Board of Health, was presented with a gold headed cane in recognition of the work for the state in public health. Dr. George M. Cooper, Clinton, was elected president and Dr. W. S. Rankin, Raleigh, secretary of the board.

State Society Meeting.—In addition to the executive officers of the Medical Society of the State of North Carolina who were noted in THE JOURNAL of June 28, page 2055, the following councilors were elected: first district, Dr. J. L. Spruill, Columbia; second district, Dr. K. F. B. Bonner, Morehead City; third district, Dr. L. B. Evans, Clarkton; fourth district, Dr. M. M. Saliba, Wilson; fifth district, Dr. Peter John, Laurinburg; sixth district, Dr. R. L. Felts, Durham; seventh district, Dr. A. J. Crowell, Charlotte; eighth district, Dr. W. M. Jones,

Greensboro; ninth district, Dr. D. J. Hill, Lexington, and tenth district, Dr. M. L. Stevens, Asheville. Dr. John R. Irvin, Charlotte, was elected orator, Dr. A. S. Pendleton, Raleigh, essayist, and Dr. Davis S. George, Marshallburg, leader in debate. Raleigh was selected as the place of meeting for 1914. Dr. Albert Anderson, Raleigh, is chairman of committee on arrangements.

OHIO

New Officers.—Dayton Medical Society, June 13: president, Dr. Charles J. Otto; secretary-treasurer, Dr. J. F. Wuist.

Medical Board Changes.—Dr. T. T. A. McCann, Dayton, has been elected president and Dr. Lee Humphrey, Malta, vice-president of the State Medical Board.

Dentist on State Health Board.—Homer C. Brown, D.D.S., Columbus, has been appointed a member of the State Board of Health, vice Dr. Frank Warner, Columbus.

Weber Memorial Fund.—As a memorial to the late Dr. Gustav C. E. Weber, his friends and brethren practitioners have undertaken to create a suitable fund, the income of which will be used to provide worthy students with free access to the medical library of the Cleveland Library Medical Association.

Personal.—Dr. O. J. Chaney, Piqua, sailed for Europe, July 1.——Dr. E. A. Baber, Dayton, has been fully exonerated of charges of neglect of duty and improper conduct preferred by Dr. J. Val. Koch, Dayton.——Dr. J. W. Clark, physician at the State Penitentiary, Columbus, has resigned to take effect September 15.

GENERAL

Elections.—The twenty-fourth annual meeting of the Baltimore and Ohio Railroad Surgeons Association was held in Pittsburgh, June 10-12, and the following officers were elected: president, Dr. John Palmer, Jr., Wilmington, Del.; vice-presidents, Drs. Page Edmunds and J. F. Tearney, both of Baltimore; secretary-treasurer, Dr. E. E. Johnston, Baltimore.—— At the ninth annual meeting of the American-Medico Psychological Association held in Niagara Falls, Ont., June 10-13, the following officers were elected: president, Dr. Carlos F. MacDonald, New York City; vice-president, Dr. S. E. Smith, Richmond, Ind., and secretary, Dr. Charles G. Wagner, Binghamton, N. Y., (reelected). The association will meet in Baltimore next year.

Honor to American Physician.—In recognition of valuable services rendered in the organization of a Red Cross Society in China and of his practical work during the revolution, a silver medal has been presented to Dr. R. A. Bolt, director of the Tsing-Hun Medical College of Peking. The inscription on the medal reads: "The vice-president of the Republic of China and Tutu (military governor) Li, in recognition of services rendered during the revolution of 1911 among the People's Army, discovered that Dr. R. A. Bolt effectively and industriously saved and nursed the suffering wounded. It is, therefore, fit to confer on him a silver medal in order to show our appreciation of his merits (services). We also issue to him this certificate as a pledge of our faith in his services. On the one hand we confer this upon Dr. Bolt, which, on the other hand, he duly receives."

The Coming Clinical Congress.—The Clinical Congress of Surgeons of North America will hold its fourth annual session in Chicago, November 10-15. A complete program of clinics is to be held on each day from 8 a. m. to 5 p. m., covering every branch in surgery. The general headquarters of the Congress will be at the Hotel La Salle, where the eighteenth and nineteenth floors have been reserved for registration room, bulletin rooms, etc. The headquarters of the section on surgery of the eye, ear, nose and throat will be at the Hotel Sherman and at each of these headquarters the daily clinical program will be bulletined one day in advance. On each evening of the week except Saturday, there will be scientific sessions, and on Tuesday, Thursday and Friday evenings, special meetings will be held for those interested in surgery of the eye, ear, nose, throat and mouth. Dr. E. Wyllys Andrews is chairman of the committee on arrangements and Dr. Franklin H. Martin general secretary of the Congress.

Bequests and Donations.—The following bequests and donations have been announced:

Mt. Sinai Hospital, New York City, $100,000, New York Infirmary for Women and Children, $10,000, the ladies' auxiliary of Mount Sinai Hospital and Montefiore Home, each $5,000, and a donation made for the poor, convalescent or persons in delicate health, $1,000,000, by the will of Mrs. Caroline Neustadter, New York City, formerly of San Francisco.

Tuberculosis Hospital for Chautauqua County, New York, $150,000 and Brooks Memorial Hospital, Dunkirk, $6,000, for the endowment of a bed to be used by poor patients of Fredonia, by the will of Mrs. Elizabeth M. Newton, Fredonia.

Homeopathic Hospital, Pottstown, Pa., $25,000 by the will of Dr. Annie M. Hawley.

Presbyterian, Jewish, Wills Eye and Pennsylvania hospitals, Philadelphia, each $5,000 by the will of the late Henry B. Palethrop.

Pennsylvania Hospital, Philadelphia, $5,000, Home for Incurables, Philadelphia, $3,000 by the will of the late Charles M. Morton.

St. Luke's Hospital, South Bethlehem, Pa., $35,000 for the erection of a woman's and a convalescent ward, a donation by Eckley B. Coxe, Jr.

Cambridge (Md.) Hospital, four acres of land adjoining the institution, valued at $10,000.

University of California, a donation of $150,000 toward the construction of a medical research teaching hospital by John M. Keith, as a memorial to his wife.

Methodist Hospital, Indianapolis, a donation of $5,000 for the establishment of a free bed in the orthopedic department in the memory of the Rev. Samuel W. Thomas, D. D., and his wife, Margaret Thomas, by their sons.

Mount Sinai Hospital, Milwaukee, $23,000 subscribed toward the hospital fund.

Abington (Pa.) General Hospital, a donation of $50,000 toward the building fund by George W. Elkins.

FOREIGN

For the Study of Cancer.—Arthur James, London, announces that he has decided to give the income of $100,000 to the Middlesex Hospital, London, in memory of his brother, William James, for the investigation of the causes of, and the search for a cure for, cancer.

Eminent Surgeon Dies.—Sir Jonathan Hutchinson, M.R.C.S. Eng., 1850; F.R.C.S. Eng., 1862; one of the most eminent surgeons of England; died at his home in Haslemere, June 23, aged 84. Mr. Hutchinson was president of the Royal College of Surgeons in 1889-90, Hunterian professor in the Royal College of Surgeons, member of the Royal Commission on Smallpox Hospitals in 1884 and of the Royal Commission on Vaccination in 1890-96. He was knighted in 1908. He was a frequent contributor to the literature of surgery and dermatology. Among the best known of his productions are those on Fish Eating and Leprosy, Rare Diseases of the Skin, The Pedigree of Diseases and Manual of Syphilis.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, June 21, 1913.

The Government Inquiry into Nostrums

At the last sitting of the committee appointed by parliament to inquire into the advertisement and sale of proprietary remedies, Dr. A. W. J. MacFadden, chief inspector of foods under the local government board which undertakes the analysis of foods and drugs to insure that they are the proper standard, gave evidence. At present proprietary medicines are exempt from investigations by the board, but representations have been made in favor of removing this exemption. Dr. MacFadden believed that the control of proprietary medicines could not be secured by that method unless there was required a full declaration of the nature and amounts of ingredients, which would have the force of a warranty. He recommended that a censorship of medicines and labels should be set up, not to deal with all advertisements but with those brought to the notice of the authorities. It would be necessary for the maker's formula to be disclosed, but that could be done in confidence.

Mr. Guy Stephenson, assistant director of public prosecutions, suggested that a staff of inspectors or other officials might be created whose duty it would be to look out for offenses with regard to proprietary medicines, and to make a search of the files of newspapers for undesirable advertisements. They would also purchase medicines and submit them to an analyst. To be effective, the statement on the label of the formula, as suggested by the British Medical Association, would have to be couched in popular language.

Dr. W. P. Norris, chief medical officer for the Australian commonwealth in London, and until recently director of quarantine and medical adviser under the commerce act to the commonwealth, explained why the commonwealth government had undertaken restrictive action in regard to nostrums. Following the inception of the commonwealth (the union of the various Australian colonies) the protection of the public in regard to the sale of secret remedies was discussed in the House. The result was the commerce act of 1905. This deals with a large number of matters as regards false trade descriptions, and contains a special section on food and medicines.

The principles on which the regulations are based are as follows: For the protection of the purchaser an extravagant description is prohibited. It is held that the people, relatively ignorant on such subjects, need protection from exploitation which might waste their substance, and that a competent diagnosis is essential for rational treatment. Secrecy with regard to the composition of remedies for purposes of gain is held to be wrong. It is held that any person engaged in the proprietary medicine trade may reasonably be required to manifest in the descriptions and recommendations of a preparation a knowledge and appreciation of the facts of medical science and practice, and that all useful remedies are the product of pharmacologic and related clinical practice.

These principles are carried out as follows: In some cases a special label must be placed on the packet or the declaration of specific therapeutic agents is required. Dr. Norris gave examples of advertising matter that is not permitted unless satisfactory proof of its good faith is given. Such are the claims that a remedy is unique; that the maker is the "discoverer" of the remedy; that the remedy is prepared "from a famous doctor's formula." Doctors' testimonials are investigated as far as possible, and testimonials from pharmacists are objected to. Invitations to correspond with the makers are not encouraged. The term "lightning cough cure" or "the only cure" would not be accepted. Alcoholic beverages are not allowed to be sold as medicines. "Guarantees of cure" are objected to, not only on account of the unsoundness of the claim, but also because it is found that very few of the so-called guarantees are such in law. In the case of remedies for gonorrhea the following statement is required to be placed prominently on the label: "If the disease does not yield promptly and completely to treatment, medical assistance should be obtained at once. The danger of spreading the disease even after apparent cures is very great, and a reliable medical opinion as to cure should be obtained always."

Scientific Research on Mental Deficiency

In previous letters to THE JOURNAL the government bill for dealing with mentally defective persons has been described. So far it contains no provisions for medical research. The home secretary has therefore received a memorial signed by the leading medical teachers pointing out the importance of such provisions as would secure continuous research into the conditions on which such deficiency depends, and the means by which it might be remedied or prevented. It is added that mental deficiency must be due either to defective formation and development of the active structures of some portion or portions of the brain, or to defective formation or supply of the fluids by which these structures are surrounded and by which they are stimulated to activity. The possibility of the latter is shown by the comparatively modern discovery that one common form of idiocy depends on absence of the thyroid secretion. The defective persons to whom the bill applies are by no means of a uniform type, and there is much reason to hope that any treatment useful in the case of the lower members of the series would prove still more useful in raising the level of those above them and would furnish at least the first step toward a system of education founded on physiology. It is also probable that imperfect brain development and the simple intellectual functioning of defectives when carefully studied may throw valuable light on the more complicated acts of the normal individual. So far the mentally defective have been excluded from scientific observations. Either they have been wholly neglected, often in miserable surroundings, or they have been collected in institutions maintained either for profit or from philanthropic motives. These institutions have produced kind and skilful managers but have done nothing to increase our knowledge of the nature, causes and treatment of mental deficiency. The mental deficiency bill will probably bring together many subjects into one institution controlled by the state. It is of high importance that the facilities for scientific study which such institutions afford should be utilized by men of science fully conversant with all that is already known on the subject and able to point out the directions along which further inquiry should be pursued.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, June 13, 1913.

Election of a Permanent Secretary to Academy of Medicine

On June 10 the Académie de médecine elected a permanent secretary in place of the late Professor Jaccoud. As we anticipated in a previous letter, Dr. Debove, professor of clinical medicine at the Faculté de médecine de Paris, was unanimously elected. Dr. Debove was born in Paris March 11, 1845. He received his degree of doctor of medicine in 1873 and became *agrégé* in 1878 and professor in 1890. He became a member of the Académie de médecine in 1893, and in 1901 succeeded Brouardel in the functions of dean of the Faculté, which he fulfilled until 1907.

Death of Professor Vergely

Dr. Paul Vergely, formerly professor of general pathology and therapeutics at the Faculté de médecine de Bordeaux, and correspondent of the Académie de médecine, has just died, aged 75.

Third Meeting of the French Medicolegal Society

Among the questions discussed at this meeting, which was held in Paris, May 24-27, a certain number presented sufficient interest to be reported.

THE VALUE IN LEGAL MEDICINE OF RECENT METHODS OF DIAGNOSIS IN SYPHILIS

Dr. G. Thibierge, a physician of the hôpital Saint-Louis, said that the new laboratory methods permit the introduction into the medicolegal diagnosis of syphilis of important elements, permitting the affirmation more categorically than by clinical observations alone that certain lesions are syphilitic and certain persons are syphilitic; but they do not permit us to say that certain other lesions or that certain other patients are not syphilitic, or that a certain person who is syphilitic at the moment of examination was or was not so at a certain previous time, or that he became so through a given act. Therefore they leave in doubt important questions which are among the first that are asked of a medicolegal expert. Nevertheless they can, and in certain cases they should be used in medicolegal examinations, on account of the evidence which they can sometimes give. But neither the expert nor the judge is to look upon them as final, but as only one element in the diagnosis of syphilis which ought to be appreciated at its own value and utilized according to the circumstances of the case. In syphilis as in other diseases laboratory methods are the basis on which the diagnosis of syphilis should rest.

ACUTE CARBON DIOXID POISONING

Dr. Balthazard, *agrégé* in legal medicine at the Faculté de médecine de Paris, brought out the importance of the coefficient of poisoning. By this is meant the relation to the total hemoglobin in the blood of hemoglobin which has been rendered useless by being combined with carbon dioxid. Dr. Nicloux, *agrégé* of chemistry at the Faculté de médecine de Paris, said that in all the experiments done by Gréhant and himself on animals ranging from the bird to the dog, the coefficient of poisoning averaged 0.66. In the fifteen cases of carbon dioxid poisoning in which he and Balthazard made examinations, the coefficient varied between 0.5 and 0.75, the greater number averaging 0.6 as in the animals killed by carbon dioxid. Therefore it would appear difficult not to attribute to a coefficient of poisoning of 0.66 a significance when there is a question of death due or not due to carbon dioxid. If one is called on to pronounce in a case in which the coefficient of poisoning is much different from 0.66, one should not hesitate to say that it is not a case of carbon dioxid poisoning and to look for a different explanation for death.

THE QUESTION OF SURVIVAL

When several persons in the same family are killed in an accident such as a conflagration, shipwreck or railway accident, the courts are obliged to determine who died first in order to settle the estate. When the circumstances of the case do not permit this question to be settled by evidence, the civil code always presumes that it was the stronger who survived. In order to know who was the stronger the law says that the point is to be determined according to age and to sex. If those who died together were less than 15 years of age, the older is presumed to have survived; between the ages of 15 and 60 the younger is presumed to have survived, unless only a year in age intervened, in which case the man is presumed to survive the woman. After the age of 60, it is the younger without distinction of sex, who is presumed to have survived. Dr. Dufour of Marseilles reported a number of cases showing the inexactness and the weakness of these legal presumptions. He called attention to the fact that in foreign laws these articles as to presumption of survival have not been introduced.

BERLIN LETTER

(*From Our Regular Correspondent*)

BERLIN, June 13, 1913.

Personal

Professor Oestreich, the former assistant of Virchow, has given a course of instruction in pathologic anatomy for dentists.

Professor Friedberger has been appointed as department head in the pharmacologic institute at Berlin.

Professor Abderhalden, contrary to expectation, has decided to decline the call to Vienna as the successor of Professor Ludwig.

June 6, Prof. Theodor Wayl, a well-known hygienist, died in Berlin, aged 63. In 1879-1880 he was docent in Erlangen and joined the faculty of the technical high school at Charlottenburg as docent for hygiene some years ago. Among his numerous literary publications, the most important is the large nine-volume "Handbook of Hygiene," of which a second edition will shortly appear. He has published a large number of articles on hygiene, especially studies on municipal hygiene.

American Physicians Visiting in Berlin

At the end of July a large number of American physicians will come to Berlin on their medical study trip through Europe. In consideration of the friendly hospitality which has been repeatedly accorded to German physicians in America, a hospitable reception will be provided by the Berlin medical profession for their American colleagues. For this purpose a reception committee, consisting of delegates from various associations, has been formed.

Friedmann's Case in the Berlin Medical Society

A short announcement on the program of the last session of the Berlin medical society (Berliner medizinische Gesellschaft) of a communication by Professor Westenhöfer, the head of the department of the pathologic institute of this place, with regard to the findings at the necropsy of a tuberculous patient treated with Friedmann's remedy, resulted in a quite unanimous demonstration against Friedmann. The necropsy findings which Professor Westenhöfer demonstrated constitute at least a warning to be cautious in the estimate of the Friedmann remedy. At the point of injection evident tuberculosis was found; the pathologic process in the young patient with strong predisposition, who according to the statement of his physician had been doing relatively well previous to the treatment by Friedmann, showed a very marked aggravation of the tuberculosis process to which he succumbed. Friedmann had given him assurance of complete recovery. The speaker censured Friedmann—and this censure was repeated by other speakers in the course of the evening—because Friedmann had not fulfilled his promise to lay before the society a scientific account of his method. He spoke very earnestly against Friedmann's methods in his foreign tour. Madame Professor Rabinowitsch has tried to penetrate the secret of the important and success-bringing culture of tubercle bacilli with which Friedmann claims to cure tuberculosis and in regard to which he maintains the strictest silence. Apparently it is connected, as has already been assumed, with a culture from cold-blooded animals, which, however, as previous researches have shown, is by no means harmless to warm-blooded animals.

The only defender of Friedmann was Professor Schleich, who had formerly assisted Friedmann and did not desert him in the present difficult situation. He stated that without doubt successful results had been achieved in Friedmann's patients. He further announced in Friedmann's name that the latter after his return would put his remedy at the disposal of physicians. Professor Max Wolff has examined cases treated by Friedmann and could not find any improvement. Prof. Fritz Meyer saw, in the beginning, occasionally rapid apparent improvement from the use of tubercle bacilli derived from cold-blooded animals which were said to be identical to those used by Friedmann, but this improvement ceased with extraordinary quickness. Privy Councilor Schwalbe, the editor of the *Deutsche medizinische Wochenschrift*, emphasized the opinion that a vote of lack of confidence was necessary at this place because the fact that Friedmann had described his remedy in the Berlin medical society was being used as an advertisement. The procedure of Friedmann should be most severely condemned by German physicians.

Transactions of the German Central Committee for the Tuberculosis Campaign

The general meeting of the committee in charge of the campaign against tuberculosis was held in May. I will give you a few interesting results of the transactions.

WELFARE WORK FOR THE TUBERCULOUS

From the report of the general secretary, it appears that in the past fiscal year about $375,000 (1,500,000 marks) were expended for the establishment of sanatoriums and places for the care of tuberculous patients in Germany. At present there are 142 sanatoriums for adults in which 41,000 pulmonary patients were treated in the last year, with an average residence of only three months. There are 27 sanatoriums for tuberculous children. For those threatened with tuberculosis, and for scrofulous children, there are 103 institutions with a total of 2,400 beds. The children's sanatoriums were equipped with manual training departments as a matter of experiment.

Patients with bone and joint tuberculosis are received in 22 sanatoriums with 1,800 beds. For the selection of the patients there are 42 observation stations. There are 222 homes for consumptives in the advanced stages; further there are 23 convalescent homes which, however, can admit only a small number of tuberculous patients. There are now 1,500 dispensaries, the chief function of which is the care, at their homes, of the tuberculous, generally those in an advanced stage.

It is especially remarkable that in the year 1912 there again occurred a reduction in the tuberculosis mortality to 14.49 per ten thousand living, as compared with 15.12 in the year 1911.

INSTITUTIONAL CARE IN ADVANCED CASES

Dr. Ritter, physician-in-chief of the Hamburg sanatoriums for pulmonary diseases, called attention in an extensive address, to the importance of sanatoriums and hospitals in the care of consumptives. According to him the importance of institutional treatment and the isolation of those seriously sick in institutions is shown by the distinct reduction in tuberculosis mortality in England, where the patients are cared for less by sanatoriums for the mild cases than by hospitals for the patients seriously ill. Also in Hamburg the tuberculosis mortality was reduced to a very satisfactory degree, as shown incidentally, with a marked increase in the deaths from tuberculosis in hospitals, which rose from 40 to 56 per cent.

Dr. Stuertz of Cologne spoke on the same subject. He advocates the more frequent building of special tuberculosis hospitals. When the necessary funds are lacking the present hospital should, as soon as possible, be provided with arrangements for fresh-air treatment, and particularly the country hospitals should be employed for the reception of tuberculous patients, both mild and severe cases.

TUBERCULOUS MORBIDITY AMONG PHYSICIANS AND NURSES

Dr. Hamel, a member of the imperial public health office, reported on the tuberculous infection of physicians and the nursing staff in hospitals. His opinion is that the morbidity figures for pulmonary and laryngeal tuberculosis furnished by the physicians and nurses of the general hospital and the special hospitals for tuberculosis, including 2,650 physicians and 13,500 nurses, are not especially high. The annual morbidity figure of physicians in general hospitals was 0.29 per cent. and in the special institutions for tuberculosis, mostly public sanatoriums, 0.08 per cent.

The morbidity figure for the nursing-force in general hospitals was 0.6 per cent., and in the special institutions for tuberculosis 0.42 per cent. About half of the cases occurring in general hospitals, and about six-sevenths in special institutions for tuberculosis, were referred to a professional infection. The physicians and nurses attending tuberculous patients in the special wards for tuberculosis were attacked with a professional infection to a much greater degree than the medical and nursing staff in the other wards. In the general hospitals the attacks of tuberculosis of the attending physicians or of the nursing force was about four times as frequent as in the other departments. Compared with the internal medicine service, infection occurred nearly three times as often among physicians in the separate ward for consumptives, and twice as often in the nursing force.

With reference to professional infections the special ward for consumptives, compared with the other departments, showed among physicians eleven times as many cases; among the nursing staff nine times as many, and compared with the department for internal medicine, thirteen times as many among physicians and four times as many among nurses. In the general hospitals the attacks of tuberculous professional infections among assistant physicians were more than a third more frequent than among the medical practitioners, and seven times as frequent as among the attending physicians.

A relationship between the frequency of attacks of tuberculous infection of the physicians and the nursing force, and the more or less recent establishment of the institutions could be shown only to the extent that the relative frequency of attacks or infections of physicians or the nursing force in the institutions with older equipment was about twice as great as in institutions with modern equipment. The frequency of tuberculous diseases or infections could not be associated with the overwork of the nurses, as far as this is shown by the number of beds under the care of a single nurse.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, June 12, 1913.

Regulations Pertaining to Laboratories and Curative Institutes

When the old law dealing with sanitary and medical institutions was passed in 1870, there was little necessity for laboratories or special institutes for treatment apart from hospitals, as the doctor of that epoch was always able to make all the scientific examinations and give the treatment as known at that time in his own office. Since then, however, the number of chemical diagnostic means has increased to such a degree that no one doctor is able to master them all, not to speak of the time required for them. The bacteriologic, serologic, roentgenologic, physical-light, electrical and mechanical treatments have become so important that medicine cannot do without these aids. Therefore special diagnostic and therapeutic institutions have sprung into existence like mushrooms. In order to control such institutions and to safeguard the public, a series of regulations has been worked out, of which those most interesting to the profession have recently been again brought to the notice of the doctors by the medical councils.

Three different kinds of institutions are marked out by the regulations:

1. Laboratories for microscopic examinations conducted on commercial lines. They must be conducted by duly qualified medical men who must prove their competency for this kind of work by special testimonials. These laboratories are not allowed to make any experiments with cultures and on animals, and they must not handle or conduct examinations when there is suspicion of pest, cholera, yellow fever, smallpox and blackwater fever. They have chiefly to make microscopic examinations for diagnostic purposes.

2. Laboratories for cultures and animal experiments. Such laboratories can also prepare and sell preparations and cultures of bacteria, they can conduct animal experiments for diagnostic purposes only, of which exact records must be kept. They can make vaccines, but they too must not deal with the five pathogenic bacteria mentioned.

3. Laboratories maintained or authorized by the state for scientific purposes. These are entitled to conduct all kinds of bacteriologic and animal experiments.

As a rule only the first-mentioned class of laboratories used to be permitted by the authorities, but the enormous increase of the medical requirements for an exact diagnosis at present necessitates animal experimentation or pure cultures. Therefore the second group of laboratories will have to be permitted in a much higher number, or the first group will have to receive the privileges of the second class too. In order to safeguard the public against abuse and danger, a strict control of such institutions will also be an imperative necessity. As regards the therapeutic institutions, it has become quite the custom here to conduct any especially complicated method of treatment in a special institute, not in the doctor's private office. Here it is important that the director be a duly qualified medical man and that the administrative part be strictly separated from the therapeutic part. The medical councils, in this respect, rule that public advertisements, except in medical periodicals, are not ethical. All the sanatoriums which advertise such procedures as can be done by the private practitioner in his office should not be patronized by the doctors, as they injure the general practitioner or the specialist. In any case, therapeutic procedures in sanatoriums not controlled by doctors should under no condition be allowed.

A Petition for Supplying Radium to the Hospitals

A few days ago the head of our gynecologic and dermatologic clinics waited on the ministers of education and the prime minister and handed over to them a memorandum in which they explained the necessity of supplying a sufficient quantity of radium and mesothorium to the hospitals. They pointed to the reports made at the Gynecologic Congress in Halle, at which most favorable results of the treatment of inoperable carcinoma and sarcoma of the female organs by actinic energy were published by competent men (Krönig and Doederlein). The ministers have promised to do whatever they are able to comply with the just wishes of the eminent scientists, among whom were Wertheim and Riehl.

It is interesting to note that a large quantity of radium is being found and made in Austria. For years it was exported nearly exclusively to the United States. Nearly all the radium manufactured in France also comes from Austria, since Madame Curie has the right to get all the pitchblende she requires from Joachimsthal, the Austrian mining-place. She has thus received 1.5 gm. (24 grains) of radium valued at about $215,000 (1 million kronen) from the Austrian government. This is the bulk of the radium used in France for medical purposes. In this country the substance could not be had for a long time. Only quite lately the radium station at the general hospital in Vienna received 0.5 gm. (7½ grains) of radium, but instead of using it only for scientific and curative purposes, the red-tape bureaucracy required that this radium, worth a quarter of a million, should bring in due interest at a rate of at least 5 per cent. It is being lent for money to the wards and to private practitioners, but only between the hours of 8 a. m. and 6 p. m. Thus thousands of hours of radio-activity have been and are being lost to science, during which time all the experiments could have been made, which other more fortunate men were able to conduct elsewhere. The conditions were also illustrated in the memorandum. Von Krönig, whose report at the congress was so interesting, worked with mesothorium, of which he had a large quantity. In a short time a large supply of this substance will be on the market and then perhaps a more general use will be possible.

Marriages

ARTHUR ALOYSIUS MULLIGAN, M.D., Harrison, N. J., to Miss Catheryn Corinne McArtle of Jersey City, at Avon-by-the-Sea, N. J., June 18.

ALBERT M. COOK, M.D., New Castle, Pa., to Miss Gevien Rudesill, formerly of New Castle, at Los Angeles, June 11.

AUGUSTUS PHILIP HAUSS, Sr., M.D., New Albany, Ind., to Miss Rosetta V. K. Couzens of Detroit, Mich., June 18.

AUSTIN BASSETT THOMPSON, M.D., Orange, N. J., to Miss Bessie Meacham Allsop of Williamstown, Mass., June 26.

WILLIAM C. MCLAUGHLIN, M.D., Providence, R. I., to Miss Katherine R. Learson of Roslindale, Mass., June 11.

WILBUR C. SMITH, M.D., Kansas City, Mo., to Miss Genevieve Taylor, in Topeka, Kan., Dec. 31, 1912.

MOTT PARKER BLAIR, M.D., Marshville, N. C., to Miss May Bloxom, at Fairview, Eastern Shore, Va., June 4.

GEORGE F. H. BOWERS, M.D., Worcester, Mass., to Miss Irene Page of Newton Highlands, Mass., June 19.

JAMES DAVIS LEWIS, M.D., Scranton, Pa., to Miss Myrtle Brace Roberts of Clark's Summit, Pa., June 18.

LOUIS J. LINDER, M.D., East St. Louis, Ill., to Miss Helen L. Bolt of Brighton, Ill., at Alton, Ill., June 11.

JESSE M. SPIKES, M.D., Swarts, Ark., to Miss Alma Spikes of Pocahontas, Ark., at Attica, Ark., June 18.

CLIFTON KERSEY TIMMONS, M.D., Chicago, to Miss Bernice Elizabeth Cota of Lagrange, Ill., June 24.

SAMUEL BURTON MCGARRY, M.D., Searsboro, Iowa, to Miss Vivian Ahrens of Perry, Iowa, June 11.

JACOB EDWIN TUCKERMAN, M.D., Cleveland, Ohio., to Miss Katherine Barton of Mercer, Pa., May 30.

SEBREE S. MCGINNIS, M.D., Tribune, Kan., to Miss Abby Baker of Pueblo, Colo., June 24.

ROBERT HARDIN, M.D., Tarry, Ark., to Miss Gertrude Green of Little Rock, Ark., June 12.

EDWARD ORVILLE SAGE, M.D., to Miss Bessie Baumeister, both of Louisville, June 18.

BERT LESLIE TAYLOR WOOD, M.D., to Miss Edna Swissler, both of Chicago, June 25.

JOHN HOMANS, M.D., to Miss Alice F. Knapp, both of Boston, June 10.

Deaths

Frank Hartley, M.D. College of Physicians and Surgeons, New York City, 1880; formerly a member of the American Medical Association; a member of the New York Clinical Society, New York Academy of Medicine and American Urological Association; professor of clinical surgery in his alma mater; attending surgeon to the New York Babies' Hospital; consulting surgeon to the French, Italian, General Memorial, St. Joseph's, Paterson, Nyack and White Plains hospitals; died at his home in New York City, June 19, from nephritis, aged 57.

Hans Peter Jensen, M.D. Long Island College Hospital, Brooklyn, N.Y., 1873; a member of the Nebraska State Medical Association; a veteran of the Civil War; for forty-two years a practitioner of Omaha; at one time professor of materia medica in Creighton University; professor of electrotherapeutics in the medical department of the University of Nebraska; consulting physician to the Union Pacific System; died at his home in Omaha, June 10, aged 68.

Frank Tryon Meriwether, M.D. University of Louisville, Ky., 1886; a member of the American Medical Association, Mississippi Valley Medical Association and Southern Surgical and Gynecological Association; for eight years a member of the Medical Corps of the Army; one of the most prominent surgeons of North Carolina; died in a hospital in Asheville, June 12, three days after an operation for appendicitis, aged 48.

Ira Bourland Ladd, M.D. Cooper Medical College, San Francisco, 1896; of Stockton; a member of the Medical Society of the State of California; surgeon of U. S. Volunteers during the Spanish-American war, with two years' service in the Philippine Islands; chief surgeon of the Central Emergency Hospital, Stockton; died in the Morton Sanitarium, San Francisco, June 6, after the removal of a tuberculous kidney, aged 44.

Severin Lachapelle, M.D. University of Victoria College, Coburg, Ont., 1874; professor of general pathology and pediatrics in Lavall University, Montreal; formerly mayor of St. Henry; a member of the Dominion Parliament from 1892-1896; superintendent of the Montreal Crèche and one of the founders of *La Goutte de Lait;* died at his home in Montreal, June 18, from cerebral hemorrhage, aged 61.

Abel John Philip Baltzer, M.D. Bellevue Hospital Medical College, 1892; a member of the American Medical Association and president of the board of health of Hickman, Ky.; who had been suffering from malignant disease of the throat; died in his office, June 8, aged 43, from the effects of a gunshot wound of the head believed to have been self-inflicted with suicidal intent.

William Edwin McFarland, M.D. Beaumont Hospital Medical College, St. Louis, 1897; a member of the State Medical Society of Wisconsin; formerly a practitioner of Trempeleau; died at his home in Bismarck, Mo., June 7, from the effects of atropin, self-administered, it is believed with suicidal intent, aged 47.

William Die McPhee, M.D. Kansas Medical College, Topeka, 1898; of Anthony, Kan.; coroner of Harper County in 1904 and county health officer in 1905-1906; local surgeon of the Rock Island System; aged 42; while suffering from melancholia, hung himself at the home of his parents in Anthony, June 8.

William L. Manchester, M.D. Eclectic Medical Institute, Cincinnati, 1889; for many years a practitioner of Carthage, Mo; while standing on the interurban car tracks in front of his home near Lexington, Ky., June 7, was struck by a train and died from his injuries in less than an hour, aged 70.

John Maurice Vaughan, M.D. Howard University, Washington, D. C., 1900; who had been in ill health from nervous disease for six months; died at his home in South Richmond, Va., June 15, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent, aged 42.

John Robert Jenkins, M.D. Miami Medical College, Cincinnati, 1879; a member of the Indiana State Medical Association; a Confederate veteran; formerly a practitioner of Shelbyville and Hammond, Ind.; died at the home of his daughter in Evanston, Ill., June 15, from nephritis, aged 71.

Nathaniel Henry Alcock, M.D. University of Dublin, Ireland, 1896; a recognized authority on physiology; vice-dean of St Mary's Hospital Medical School, Dublin, and since 1911, professor of physiology in McGill University, Montreal; died at his home in that city, June 12, aged 42.

John Nutting Farrar, M.D. Jefferson Medical College, 1874; a dentist of New York City; formerly a member of the American Medical Association; one of the first to advocate the correction of irregularities of the teeth; died at his home in New York City, June 13, aged 73.

Alexander P. Hamilton, M.D. Jefferson Medical College, 1866; for many years a resident of Fredonia, Kan., and Carthage, Mo.; for twelve years professor of mathematics in a college in Lexington, Ky.; died at the home of his son, near Carthage, June 13, aged 78.

John T. Stephenson, M.D. Missouri Medical College, St. Louis, 1882; a member of the Missouri State Medical Association; died at his home in Tina, June 7, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent, aged 55.

James C. Jordan, M.D. Drake University, Des Moines, Ia., 1908; a member of the American Medical Association; of Des Moines; one of the most promising young surgeons of Iowa; died at the home of his parents in De Soto, Ia., June 10, from pneumonia, aged 30.

Albert Henry Phelps, M.D. University of Vermont, Burlington, 1884; for four years a member of the medical staff of the Santa Fe system; a member of the Legion of Honor of France; died at his home in Glens Falls, N. Y., June 14, from heart disease, aged 50.

Daniel Joseph Scully, M.D. College of Physicians and Surgeons, New York City, 1899; a member of the American Medical Association and a specialist in tuberculosis, of Colorado Springs; died at his home June 16, from bronchopneumonia, aged 37.

Helen Kidd McIlvaine, M.D. Northwestern University Woman's Medical School, Chicago, 1895; a member of the Indiana State Medical Association; of Huntington, Ind.; died in Denver, Colo., June 14, from pneumonia, five days after a surgical operation.

Warren Clark Eustis, M.D. Bellevue Hospital Medical College, 1877; a member of the Minesota State Medical Association; of Owatonna, Minn.; died in the Mound Park Sanitarium, St. Paul, Minn., May 28, from nervous breakdown, aged 66.

Eugene Lee Crutchfield, M.D. University of Maryland, Baltimore, 1887; a member of the staff of St. Joseph's Hospital, Baltimore, and a member of the Johns Hopkins Glee Club; died in his room in Baltimore, June 12, from pneumonia, aged 50.

James Nelson Martin, M.D. University of Michigan, Ann Arbor, 1883; for many years until 1901 Bates professor of diseases of women and children in his alma mater and later a resident of Los Angeles; died in San Diego, June 11, aged 61.

Llewellyn Claude Manchester, M.D. Rush Medical College, 1889; a member of the American Medical Association; for eight years a member of the Pittsburgh Eye and Ear Hospital; died at his home in Pittsburgh, June 13, aged 50.

Don C. La Verne, M.D. University of Tennessee, Nashville, 1907; of Senatobia, Miss.; a member of the American Medical Association; died in the Gartley and Ramsey Hospital, Memphis, Tenn., June 6, from uremia, aged 29.

Charles Wesley Mills, M.D. College of Physicians and Surgeons, San Francisco, 1899; a member of the American Medical Association; of Arcata, Cal.; was instantly killed in an automobile accident near Arcata, June 10.

Guy O. Brinkley, M.D. College of Physicians and Surgeons, Baltimore, 1902; a member of the Medical Association of Georgia; aged 40; was shot and killed by a patient in his office in Savannah, June 16.

George William Johnson, Jr., M.D. Medical College of the State of South Carolina, Charleston, 1911, and later an intern in Roper Hospital; died at his home in Charleston, June 12, from typhoid fever, aged 26.

John Earley, M.D. Northwestern Medical College, St. Joseph, Mo., 1884; a veteran of the Civil War and a practitioner of Worth County for forty-five years; died at his home in Grant City, June 16, aged 73.

Edward F. Becker, M.D. Jefferson Medical College, 1871; for many years grand medical examiner of the Sons of Hermann; a Confederate veteran; died at his home in Brenham, Tex., June 9, aged 74.

Richard Fletcher Van Heusen, M.D. Albany (N. Y.) Medical College, 1895; a member of the Medical Society of the State of New York; died at his home in New York City, June 16, from nephritis, aged 46.

Maud Marion Walter, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1898; one of the proprietors of the Walter Sanatorium, Reading, Pa.; died in that institution, June 14, aged 39.

Hillary Wingo Williams M.D. University of Texas, Galveston, 1913; died at the Municipal Hospital, Philadelphia; where he was an intern, June 17, from scarlet fever, aged 25.

George B. Sellards, M.D. Detroit College of Medicine, 1907; a member of the American Medical Association; died at his home in Deerfield, Mich., June 13, from heart disease, aged 37.

Thomas H. Cooper (license, Tennessee, 1889); a Confederate veteran; for more than forty years a practitioner of Putnam County; died at his home in Brotherton, June 13, aged 70.

Maurice Pritchard, M.D. Detroit Medical College, 1887; a member of the board of health of Virginia City for several years; died at his home in Reno, Nev., June 12.

Ephraim O. Thomas (license, Indiana); a practitioner of Marion, Ind., for twenty-five years; died in the East Haven State Hospital, Richmond, June 13, aged 67.

Charles Caldwell Lewis, M.D. Vanderbilt University, Nashville, Tenn., 1881; died at his home in Alamo, Tenn., May 17, from cerebral hemorrhage, aged 62.

McLean Caverly, M.D. Trinity Medical College, Toronto, Ont., 1890; formerly of Belleville; died at his home in Trenton, Ont., June 8, aged 55.

Benjamin Franklin Shipley, M.D. University of Maryland, Baltimore, 1883; died at his home in Alpha, Md., June 16, aged 64.

F. R. Smalling (license, Ark., 1903); a practitioner for forty-two years; died at his home in Wrightsville, June 6, aged 63.

George Henry DeNike, M.D. Queens University, Kingston, Ont., 1882; died suddenly in his sanatorium in Clinton, N. Y., June 13, from heart disease, aged about 57.

Harry Edgar Snow, M.D. Rush Medical College, 1887; died at his home in Belmar, N. J., June 12, from erysipelas, aged 55.

William Thomas Shelton, M.D. Louisville Medical College, 1872; died at his home in Umatilla, Fla., March 30, aged 76.

Nicholas S. Snyder, M.D. Louisville Medical College, 1874; died at his home in Hot Springs, Ark., June 5, aged 68.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

THE DUKET CONSUMPTION "CURE"

A Letter from Bennett Medical College and Comments Thereon

To the Editor:—In an editorial in the May 24 issue of THE JOURNAL, page 1646, entitled "The Duket 'Consumption Cure,'" you ask the question: "What can have led the Bennett Medical College to lend recognition to a humbug so palpable?" I think this question should be answered, and therefore I am sending this letter with the hope that you may see fit to publish it in THE JOURNAL so that others that read your article may have our answer.

In the first place, the only scientific journal that has spoken of this remedy, the investigation of which is now being conducted by some of the members of our faculty, as a "cure" has been your organ. The evidence submitted to the faculty of our college by the Hon. William Lorimer was of such a nature as to lead us to assist him in organizing a scientific laboratory in charge of scientific men. Briefly it was this:

Senator Lorimer stated that nineteen tuberculosis patients had been treated by this alleged remedy and that fourteen of them had been so benefited that they had been able to return to their usual occupations, one improved and four died. When these cases were investigated by us, we found that his statements were true, but, of course, did not know whether tuberculosis had been properly diagnosed in them or not. The object of this investigation is for the purpose of determining the merits or demerits of these claims, and not one of our laboratory board has either announced nor as yet endorsed this alleged remedy as a "cure." One and all we have stated frankly that we are getting in a position of scientifically determining whether or not it has any merit. It is not being "foisted as a cure."

It, as far as the St. Rita's Laboratory is concerned, is a problem which we are still at work on. Every scientific man knows that the answer cannot be given until sufficient time has elapsed so that the patients that are treated may, by their condition, prove or disprove Dr. Duket's claims that he has a remedy which is valuable in the treatment of tuberculosis. Your journal has devoted space to writing up the man. The St. Rita's Laboratory is devoting its energies in scientifically determining the merits of the alleged remedy. If THE JOURNAL of the American Medical Association desires to criticize our scientific methods in the conducting of this investigation, that will be your privilege; but to raise the question, as you have, about our motives or judgment in trying to prove or disprove the merits of any remedy, no difference by whom brought out, is absolutely unfair. The St. Rita's Laboratory Board is not investigating Dr. Duket. His remedy, however, is on trial. Its composition is no secret to us, and Dr. Duket has nothing to do with its preparation. It is prepared by the custodian of our board, and if our investigation proves it is of any value, it will be given to the medical world. On the other hand, if it is found to be useless in the treatment of tuberculosis, that fact will also be given to the profession.

This laboratory board has not sought publicity, but on account of the prominence of Mr. Lorimer some publicity has been unavoidable, but in every case no statement other than that written above has been given out by any one connected with us. The daily press has from time to time published excerpts from THE JOURNAL of the American Medical Association containing attacks on Dr. Duket. For this publicity we certainly cannot be held responsible. You may criticize us if you please for trying out a remedy. You may criticize Senator Lorimer for spending a large amount of money for this investigation, but I desire to assure you that we and he have no other object in this matter than to help find something of benefit for the tuberculous patient. Let me assure you that we are not "exploiting a cure." During the last ten weeks over one hundred patients have been treated with this remedy at the Grace Hospital, Chicago, and if you desire to gain first-hand knowledge, the door is open to you. Any investigation that will not stand scientific scrutiny from any scientific source is unworthy and when several hundred tuberculous patients have been treated at Grace Hospital during next year and when a record of each one of these cases has been written, and when the records have been given one by one to the profession, then your opinion and my opinion as to the merits or demerits of this remedy will be unnecessary, for the records of the cases will tell the story.

As you well know, all medical progress has not been made by the well-known scientists, and "ages long have told and will yet tell the triumphs wrought unending by men and things once held as naught." THE JOURNAL should be helping us prove or disprove the value of this alleged cure and thereby either completely eliminate it or establish its efficacy. The waters should not be muddied by attacks while we are just beginning the investigation. The proof of the pudding is the eating thereof. Why not wait for the proof?

Let there not be that "refinement of cruelty" which says to the tuberculous patient: "There is no hope other than fresh air, fresh eggs and fresh milk for your malady," but let us add to these efficient agencies a strong hope that some day some one will find a remedy, and that the one way to prove the virtues of any remedy is to try and keep trying. Let us as medical men work out this great problem scientifically, carefully and conscientiously and do unto others as we would have others do unto us, and not condemn without investigation any remedy, or unheard, any medical man.

JOHN DILL ROBERTSON, President.

P. S.: If you desire to publish this article in THE JOURNAL I respectfully request that the entire article be published, and if this cannot be done that no abstract of it be published.

J. D. R.

[COMMENT: If this answer is the best that can be given to THE JOURNAL'S question: "What can have led the Bennett Medical College to lend recognition to a humbug so palpable as the Duket cure?" we believe most of THE JOURNAL'S readers will agree that it is a lame one. Dr. Robertson says that Bennett Medical College took up the "investigation" of Duket's preparation on Mr. Lorimer's assertion that nineteen patients with—alleged—tuberculosis had received the "treat-

ment," that fourteen of these patients had been so benefited that they were able to return to work, that one had "improved" and that four had died. On Dr. Robertson's own admission, Bennett Medical College did not know whether or not any of these nineteen patients ever had tuberculosis. On such flimsy evidence—plus the persuasiveness of Mr. Lorimer's money—the college threw its influence behind this "cure" and gave it a standing it otherwise never could have had. Doubtless this action has resulted in giving the college an amount of publicity that may or may not have been desired; we venture to assert, however, that the advertising is not such as will enhance its standing in the scientific world.

It took neither a long time nor any great expenditure of energy for THE JOURNAL to find that first, Duket had no professional standing; second, he had little or no scientific training; third, even those patients who had been heralded in the Duket booklet as "cured cases" were, in many instances, dead; fourth, a number of other patients, whose cases had not been advertised but who had been "treated," also were dead. With an expenditure of a tithe of the money that Mr. Lorimer must have spent, Bennett Medical College could have proved without the possibility of a doubt the absolute and unqualified worthlessness of the Duket remedy. If it had done this quietly, unostentatiously, with no publicity that would have awakened false hopes in the minds of thousands of unfortunate sufferers from tuberculosis, the college would have done a work, which, while lending itself less to advertising purposes, would have been of distinct service to humanity.

The statement that THE JOURNAL "has devoted space to writing up the man," is false. The fact is that THE JOURNAL has carefully avoided any discussion of Duket as a man although it has in its possession plenty of material on this subject. Whatever has been said about Duket has had reference to his professional status, a point that is not only germane to the subject but indissolubly wrapped up in it.

The assertion that the "laboratory board" has not "sought publicity" would be funny if the matter were not so serious. Newspapers have heralded this new "cure" and Chicago papers in particular have printed alleged interviews with Mr. Lorimer, Dr. Duket, Father Green and others. Pictures of Duket himself, in various poses, both in and out of the laboratory, have also appeared in Chicago papers. Letters have been sent by Mr. Lorimer to the governors of states urging that representatives be sent to watch the "cure." In fact, the publicity, which we are told was "not sought," would have cost a king's ransom had it appeared as paid advertising matter.

Dr. Robertson says that THE JOURNAL should help Bennett Medical College "prove or disprove the value of this alleged cure." THE JOURNAL has done so. It has presented evidence that makes plain not only the worthlessness of the "alleged cure" but also the fraudulence of its methods of exploitation —and the evidence is so overwhelming that no intelligent layman, much less a scientifically trained physician, could fail to accept it.

There is no "refinement of cruelty" in telling the consumptive that fresh air, good food and skilful care will cure him. But it is damnable cruelty to send broadcast over the country statements that will lead, and have led, hundreds if not thousands of these unfortunate sufferers to believe that a worthless and fraudulently exploited remedy holds for them the hope of life. And when a supposedly reputable medical college aids and abets this cruel illusion, it is time that the medical profession protested, not for its own good name but in the interest of a cruelly deluded public.—ED.]

THE HYER-BALDWIN TREATMENT

Mr. Hyer Denies that Duket Uses His Preparation

To the Editor: I noticed in THE JOURNAL of May 18, 1913, which was largely copied in the daily press, what purported to be the report of a committee regarding the treatment of one Dr. Duket for tuberculosis. In that report the statement is made that Dr. Duket is supposed to be using a remedy known as the Hyer-Baldwin treatment, which they say is supposed to consist of salicylic acid and the carbonate of guaiacol, all of which they say has been extensively advertised.

I respectfully request you to correct this statement, first because there never was a treatment known as the Hyer-Baldwin treatment, and secondly because my treatment has always been known, and is known to-day, as the Hyer or Oxi-Salata treatment. I wish to further say that it has never been extensively advertised, as your report states.

Dr. Baldwin did procure this medicine from me at different times in the past, but I discontinued furnishing it to him some four or five years ago. I find that it is the belief of many physicians and a large proportion of the people in general that the Duket treatment consists of the Oxi-Salata treatment, but this is absolutely false. Therefore I respectfully ask you to make this correction in THE JOURNAL.

G. J. HYER, Chicago.

[COMMENT: The only comment necessary on this letter is that we have in our files evidence to show (1) that there was a "treatment" known as the "Hyer-Baldwin treatment" and (2) that it was widely exploited as the "Hyer-Baldwin treatment." Whether or not Duket is using the "Hyer-Baldwin treatment," we do not know, and we so stated. We do know, however, that the method of exploiting, the method of administering and the claims made for the Duket "cure" bear a striking resemblance to those made for the Hyer-Baldwin product.—ED.]

Correspondence

The Effects of High-Frequency Currents

To the Editor:—In THE JOURNAL (May 31, 1913, p. 1707) appears an editorial "The Effects of High-Frequency Currents." I am in hearty accord with the sentiments expressed in the body of the editorial. Electrotherapy, like any other therapeutic measure, can be reduced to science and logic. Any measure that can not be so reduced is not entitled to the term "therapy." Electrotherapy is understood by few, misunderstood by many, and underestimated by everybody.

In the twenty-third line of the editorial referred to, we read, "For example, it has lately been stated that a few 'treatments' with currents of from one to three amperes sufficed to increase the weight of an individual 14 kilograms."

The original article by Durig and Grau was very loosely written. In fact, nearly all writers on matters medical seem to share this fault. There are to my mind three reasons for such laxity. First, the writer assumes that his readers are as familiar with the theme as he himself is; secondly, the writer has not a perfectly clear view of the subject with the result that his writing teems with ambiguity; thirdly, there are always those who desire everybody else to know that they are thoroughly familiar with their subject, but they take good care, while their words are many, to impart as little real knowledge as possible. Such unwarranted ambiguity naturally misleads the reader, as the very next line of the editorial proves: "One might assume, on the face of such information . . ." As a matter of fact, what the original article by Durig and Grau should have stated was something like this: "A patient suffering from copremia, with a consequent loss of weight, was subjected to the diathermic method of the high-frequency current, with the result that from one to three amperes traversed the body. This amount of electrical energy was transformed into heat units within the tissues. As a result of these extra heat units without muscular exercise or the enervating influence of heat applied externally, oxidation was increased and the end-products were eliminated from the system. The individual cells of the body thereby became hungry, the appetite reestablished and absorption and above all assimilation took place. The result was as regards the food for which there was either no desire, or which, if taken, was not made use of, that 'after a few treatments, etc.,' the entire process was reversed and the patient gained in body-weight. This was not due to the mere application of the high-frequency current, but it was the result of increased metabolism." The assumption therefore based on

the article was erroneous, consequently all of the deductions fallacious.

The editorial continues: "On the other hand, it has been maintained that special modes of applications of high-frequency currents may induce a loss of two pounds in a single treatment of half an hour's duration. This is equivalent to a loss of 9,000 calories in the form of fat. Such are some of the extreme claims on record."

There is certainly nothing mysterious or incomprehensible about that phenomenon. But why waste time in figuring out the equivalent in fat calories? When a writer makes such statements as to loss in body-weight, he should make it clear that the loss is due to the profuse perspiration which this current induces.

When the high-frequency current is passed through the hindquarters of a guinea-pig, in the short space of three minutes, the temperature in the rectum registers 103 F. With this sudden rise in body-temperature, there is increased circulation due to the loss of capillary resistance. The human being not only sweats profusely, but the kidney function being increased, he has an immediate desire to void his urine. There is no good reason why, in a selected case, the sweat plus the urine should not amount to two pounds after thirty minutes' treatment. The same editorial states that "high-frequency currents of 1.9 amperes at 180 volts were transmitted to the body." These figures are entirely devoid of any meaning. According to Ohm's law, if the current strength in amperes was 1.9 and the E. M. F. in volts 180, the resistance in ohms must have been 94.7. I am not familiar with any part of the unbroken human skin where the resistance is as low as that.

Not only are all high-frequency currents the result of induction, but this induction implies a comparatively high voltage, at least into the thousands. In fact, the voltage in all high-frequency currents is so high that no instrument exists that can properly speaking measure them; they can only be approximated.

After the editorial admits a distinct rise in body-temperature, with capillary dilatation, increased heart action and profuse perspiration, it continues: "These phenomena are in no strict sense peculiar manifestations of the use of electricity. They are the result of heat." This is partly true; they are the result of heat. Yet it will be well to bear in mind this one important fact: The high-frequency current is the only agent known to mankind at the present time that is capable of causing an increase of physiologic heat in the internal parts that is greater on the inside than on the outside of the body. In all other temperature raising devices, the heat on the outside is always greater than the heat produced on the inside of the body. Since we have no other similar agent we can afford to be charitable and credit to the high-frequency current all that it is entitled to.

ALBERT C. GEYSER, M.D., New York.

The Leadership of Victor C. Vaughan

To the Editor:—At the February meeting of the Council on Medical Education, Dr. Victor C. Vaughan, the newly elected President of the American Medical Association, expressed the only dissenting conviction as regards the unfair deal being rendered the larger organization of society by the prevalent inadequate teaching of preventive medicine. His work in the study of the biochemistry of metabolism and his effort to make application of this knowledge to the needs of the individual patient as a means of arresting the pathologic physiology leading to the development of gross manifestations of disease, and his stand on the question of eugenics, together with his firm adherence to the doctrine of evolution, render him preeminently fitted for leadership in the life-saving business. For these reasons, I am proud to take my place behind him as a loyal soldier.

If every department of organized medicine will do as well as Prof. Victor C. Vaughan has done in his department of work, the medical profession will deserve honor and respect, and the larger organization of society will receive a fair deal.

When the general practitioners of America get busy applying the principles of modern science for the correction of the incipient disorders of metabolism, then will they correct the pathologic physiology which conduces to the development of gross pathology, as well as cure the condition known as "infectiousness," which lowers the natural bodily defenses and invites bacteriologic invasion, and we shall truly be engaged in "a life-saving and happiness-making business." The surgeons are brilliant fellows, but nine-tenths of their work is due to the neglect by physicians of the employment of such measures as will correct the disease-process ten years before there is a necessity for the knife. At any rate, please put me on record as being willing to take my stand in the ranks as a private, to fight for the welfare of the common people, as all will do who follow the leadership of Victor C. Vaughan.

HENRY S. MUNRO, M.D., Omaha.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

TRANSPLANTATION OF ORGANS

To the Editor:—1. Has the transplantation of organs, particularly the kidneys, passed the purely experimental stage?

2. If so, who has performed the operation, for what pathologic condition and with what success?

3. Also please give me references in the literature for articles concerning the operation.

H. B. MARVIN, M.D., Lima, N. Y.

ANSWER.—1. The transplantation of organs by vascular anastomosis is still in the experimental stage.

Mantelli, C.: Transplantation of the Kidney, *Gaz. d. osp.*, May 6, 1913.
Haberer, H. V.: End-Results of Transplantation of Pedunculated Suprarenals, *Arch. f. klin. Chir.*, xciv, No. 3, 1911.

2. Mantelli reviews the published cases and finds that they have been uniformly unsuccessful so far as the functional activity of the kidney is concerned. The author made two series of experiments, but in both of them the kidney rapidly atrophied or underwent necrosis, although he was able to secure a satisfactory anastomosis. He concludes as the result of his experiments, that the homoplastic transplantation of the kidneys of new-born animals is not followed by good results; consequently, it may be said that the transplantation of kidneys can be logically applied to human surgery only with great difficulty. From his experiments it is evident that the difficulty is not in securing a satisfactory anastomosis, for he employed a technic that had been successful in a considerable experience with vascular anastomosis, both in experimental work and in surgical operations. The results have confirmed those obtained by other experimenters.

3. The following references may be consulted:

Carrel, A.: Results of the Transplantation of Blood-Vessels, Organs and Limbs, THE JOURNAL, Nov. 14, 1908, p. 1663.
Carrel: Résultats de l'arrêt temporaire de la circulation des veines rénales, *Compt. rend. Soc. de Biol.*, Paris, March, 1909, p. 527.
Carrel: The Culture of the Tissues in Vitro, *Jour. Exper. Med.*, August, 1911, p. 209.
Borst and Enderlen: Ueber Transplantation von Gefässen und ganzen Organen, *Deutsch. Ztschr. f. Chir.*, June, 1909, xcix, 54.
Unger, E.: Advantages of Vein or Artery Wall for Plastic Operation on the Dura, *Berl. klin. Wchnschr.*, April, 1910.
Villard and Tavernier: Un cas de transplantation expérimentale du rein, *Presse méd.*, June, 1910, xviii, 489
Perrin: Thèse de Lyon, July, 1911.

RINGER'S SOLUTION IN TOXICODERMA OF PREGNANCY

To the Editor:—In the toxicoderma of pregnancy cured by Ringer's solution (THE JOURNAL, March 8, 1913, p. 793), it is not clear in what manner the injection was given—whether vaginal, rectal, subcutaneous or intravenous.

T. P. LYMAN, M.D., Chicago.

ANSWER.—Ringer's solution was injected into the buttocks by means of a syringe holding 100 c.c. Intramuscular infusion was found less convenient and reliable than the intramuscular injection.

SANITATION OF RAILWAY CARS

To the Editor:—Please give references to information regarding the sanitation of railroad or Pullman cars.

J. S. McEWAN, M.D., Orlando, Fla.

ANSWER.—The following may be referred to:

Hume, A. M.: Something about Railroad Sanitation, *Railway Surg. Jour.*, December, 1910.
Wertenbaker, C. P.: Railway Sanitation, New York *Med. Jour.*, Sept. 23, 1911.
Hume, A. M.: What is Railway Sanitation and How Can It Be Obtained? abstr. in Society Proceedings, THE JOURNAL, March 16, 1912, p. 812.
Report of Committee on Hygiene and Sanitation, *Railway Surg. Jour.*, April, 1912.
Ventilation of Sleeping Cars, *Public Health Jour.*, July, 1912.
Crowder, Thomas R., Denny, J. A., and Schroyer, C. A.: Report of Committee on Ventilation of Cars, published by American Medical Association, 1911.

LIST OF MEMBERS OF THE CONTINENTAL ANGLO-AMERICAN MEDICAL SOCIETY

To the Editor:—Physicians with patients abroad who wish to furnish them with lists of American men practicing in Europe, who have been gathered under the head of the Continental Anglo-American Medical Society, will receive this list if they will send their request, enclosing a stamped and addressed envelope, to

WALTER B. SWIFT, M.D., 110 Bay State Road, Boston.

DUTY ON MICROSCOPES

To the Editor:—I understand that the United State Senate Committee in its recommendation on the new tariff have advised raising the duty on microscopes, etc., from 30 per cent. to 45 per cent. I need not call your attention to the fact that this duty will be chiefly paid by the better class and at the same time the poorest off financially (because at the outset of their lifework) of the medical profession. Is it fair?

HENRY C. THACHER, M.D., New York.

MEDICAL ETHICS

To the Editor:—In "Queries and Minor Notes" (THE JOURNAL, June 21, 1913, p. 1976), P. W. L. asks for material for an address on Medical Ethics. In the citations I do not observe "Ethics of the Medical Profession" by Daniel Lichty, M.D., Rockford, Ill., read before the Winnebago County Medical Society, Tuesday, Dec. 10, 1912, and appearing in *Medical Progress*, Louisville, Ky., June, 1902. DANIEL LICHTY, M.D., Rockford, Ill.

MARRIAGE OF EPILEPTICS

To the Editor:—Please allow me to ask if any of your readers know of any case or cases in which two persons, both being subject to epileptic seizures, have married and if any or all of the issue of such marriage have also been subject to epileptic seizures or any of them exempt therefrom. W. CONYERS HERRING, M.D.
435 West One-Hundred-and-Nineteenth Street, New York.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

A RECOVERY BY A PHYSICIAN AS A BAR TO MALPRACTICE

A recent inquiry calls attention to an important medicolegal problem which might develop during the professional career of any physician.

In the case in hand a western physician had sued a patient to recover compensation for services rendered, and had obtained a judgment therefor. Subsequently the patient brought his action against the physician, alleging malpractice. The question arising is whether or not the judgment obtained by the physician would bar by way of estoppel the suit brought by the patient.

An examination of the cases and writers on the subject discloses a conflict of authorities, the minority holding that the action would be barred under all circumstances, while the majority maintains that the judgment would act in bar only in cases in which the question of malpractice had been either directly or indirectly adjudicated by the court having prior jurisdiction.

Clearly should a defense of malpractice be interposed by the patient in the suit instigated by the physician, judgment for the plaintiff would bar any subsequent action, based on the alleged negligence brought by the defendant in the contract action,[1] provided that the physician brought his suit in a court of proper jurisdiction.

Again, supposing that the patient appeared and defended, but did not plead malpractice. Under these circumstances, the majority would apparently hold the judgment for the physician to constitute a bar to the subsequent action for malpractice, because this question was indirectly adjudicated in the first court of proper jurisdiction.[2]

The minority asserts[3] that a judgment so rendered is not necessarily decisive of the question of malpractice, as this is not in issue unless introduced in evidence, and no court can decide a point that is not actually before them for a ruling.

Finally, supposing the patient failed to appear and defend, and that the judgment entered for the plaintiff was on an *ex parte* hearing, that is by default. Here the majority holds that the judgment for the physician would constitute no bar to the subsequent action brought by the patient for malpractice, for in order to obtain a judgment it was simply necessary to show that the services rendered were of value and that the sum demanded as compensation was under the circumstances reasonable. The physician did not have to show that he had not been negligent, as it was necessary for him to set forth in his declaration and prove only such facts as are essential to a contract action. Again, these actions by physicians are usually brought in courts of limited jurisdiction. It would consequently be inequitable to hold a man barred from an opportunity to recover damages for a *bona-fide* injury simply because of the limitations of the forum, which had not even passed on the question of malpractice.

The minority, on the other hand, advances the perhaps logical but nevertheless highly technical argument that the defendant has had his day in court, and that the question of malpractice has been adjudicated. It is asserted that inasmuch as the services must be proved to be of value, that conclusion being reached, it is obviously impossible to maintain the opposite. Hence a thing which is of value cannot be harmful, and therefore any possibility of negligence or malpractice must of necessity be negatived. Thus in passing on the value of the services the court also rules as to negligence, and such a judgment would bar by estoppel a subsequent action for malpractice.[5]

SUMMARY

1. A recovery by a physician is a bar to an action for malpractice when that defense was interposed in the suit instituted by the physician.

2. It is asserted that a recovery by a physician is likewise a bar even though malpractice be not interposed but some other defense set up; there is strong argument, however, to the contrary.

3. A recovery by a physician does not constitute a bar to an action for malpractice when the judgment was by default, a minority to the contrary notwithstanding.

1. Howell v. Goodrich, 69 Ill. 556; Goble v. Dillon, 86 Ind. 327, 44 Am. Rep. 308; Jordahl v. Berry, 72 Minn. 119, 71 Am. St. Rep. 469; Sykes v. Bonner, 1 Cinc. Sup. Ct. 464; Sale v. Eichberg, 105 Tenn. 333; Lawson v. Conaway, 37 W. Va. 159, 38 Am. St. Rep. 17; Ressequie v. Byers, 52 Wis. 650, 38 Am. Rep. 775.

2. Jordahl v. Berry, 72 Minn. 119, 45 L. R. A. 541 and note; Sale v. Eichberg, 105 Tenn. 333; Lawson v. Conaway, 37 W. Va., 159; Bellinger v. Craigin, 31 Barb. (N. Y.) 534; Gates v. Preston, 41 N. Y. 143; Blair v. Bartlett, 75 N. Y. 150, 31 Am. Rep. 455; Schopen v. Baldwin, 83 Hun (N. Y.) 234; see also Schwinger v. Raymond, 83 N. Y. 97, 38 Am. Rep. 415.

3. Goble v. Dillon, 86 Ind. 327; Ressequie v. Byers, 52 Wis. 650; Sykes v. Bonner, 1 Cinc. Sup. Ct. 464.

4. Goble v. Dillon, 86 Ind. 327, 44 Am. Rep. 358; Jordahl v. Berry, 72 Minn. 119, 71 Am. St. Rep. 469; Sykes v. Bonner, 1 Cinc. Supt. Ct. 464; Lawson v. Conaway, 37 W. Va. 159, 38 Am. St. Rep. 17; Howell v. Goodrich, 69 Ill. 556; Ressequie v. Byers, 52 Wis. 650, 38 Am. Rep. 775.

5. Bellinger v. Craigin, 31 Barb. (N. Y.) 534; Gates v. Preston, 41 N. Y. 143; Blair v. Bartlett, 75 N. Y. 150, 31 Am. Rep. 455; Schopin v. Baldwin, 83 Hun (N. Y.) 234; see also Schwinger v. Raymond, 83 N. Y. 97, 38 Am. Rep. 415.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA: Capitol, Montgomery, July 8. Sec., Dr. W. H. Sanders, Montgomery.

CONNECTICUT: Regular, City Hall, New Haven, July 8-9. Sec., Dr. Charles A. Tuttle, 196 York Street; Homeopathic, Grace Hospital, New Haven, July 8. Sec., Dr. Edwin C. M. Hall, 82 Grand Avenue; Eclectic, New Haven, July 8. Sec., Dr. T. S. Hodge, 19 Main St., Torrington.

DISTRICT OF COLUMBIA: Washington, July 8. Sec., Dr. George C. Ober, 125 B St., S. E.

INDIANA: State House, Indianapolis, July 8-11. Sec., Dr. W. T. Goff, 120 State House.

MAINE: State House, Augusta, July 15-16. Sec., Dr. Frank W. Searle, 776 Congress St., Portland.

MASSACHUSETTS: State House, Boston, July 8-10. Sec., Dr. Walter P. Bowers, Room 159, State House.

MONTANA: Senate Chamber, Capitol Bldg., Helena, July 8. (First special examination held aside from regular semi-annual examinations.) Sec., Dr. William C. Riddell, Helena.

NEW HAMPSHIRE: Concord, July 8-9. Regent, Mr. H. C. Morrison, State Library.

NEW MEXICO: Santa Fe, July 14. Sec., Dr. W. E. Kaser, East Las Vegas.

OKLAHOMA: Guthrie, July 8-10. Sec., Dr. John W. Duke, Guthrie.

RHODE ISLAND: State House, Providence, July 10. Sec., Dr. Gardner T. Swarts, State House.

SOUTH DAKOTA: Capitol Bldg., Pierre, July 8. Sec., Dr. L. G. Hill, Watertown.

UTAH: Salt Lake City, July 7-8. Sec., Dr. G. F. Harding, 310 Templeton Building.

VERMONT: Burlington, July 8-11. Sec., Dr. W. Scott Nay, Underhill

WEST VIRGINIA: Charleston, July 14-16. Sec., Dr. H. A. Barbee, Point Pleasant.

Utah January and April Reports

Dr. G. F. Harding, secretary of the Utah State Board of Medical Examiners, reports the written examinations held at Salt Lake City, January 8 and April 8, 1913. The number of subjects examined in was 22; total number of questions asked, 100; percentage required to pass, 75. At the examination held in January, the total number of candidates examined was 8 of whom 6 passed and 2 failed. Two candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Hahnemann Med. College and Hospital, Chicago	(1905)	75
Rush Medical College	(1912)	80.8, 84.4
College of Physicians and Surgeons, Baltimore	(1912)	85
Creighton Medical College	(1912)	80.6
Queen's University, Kingston, Ontario	(1907)	75

FAILED

Northwest. University Med. School, (1894) 68.2; (1912)		73.9

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Marion Sims College of Medicine, St. Louis	(1898)	Missouri
Washington University, St. Louis	(1908)	Missouri

At the examination held in April, the total number of candidates examined was 6 all of whom passed. Two candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Northwestern University Medical School	(1894)	76.1
Rush Medical College	(1912)	83.2
University of Louisville	(1903)	78.9
Coll. of Physicians and Surgeons, Baltimore	(1912)	83.8
Washington University, St. Louis	(1912)	86.9
St. Louis University	(1913)	80.3

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Northwestern University Medical School	(1911)	Illinois
University Medical College, Kansas City	(1897)	Illinois

Massachusetts March Report

Dr. Walter P. Bowers, secretary of the Board of Registration in Medicine, reports the written, oral and practical examination held at Boston, March 11-13, 1913. The number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 57 of whom 32 passed, including 5 non-graduates and 2 osteopaths, and 25 failed, including 14 non-graduates and 4 osteopaths. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
George Washington University	(1908)	83
State University of Iowa, College of Medicine	(1913)	83
Medical School of Maine, (1890) 75; (1904) 75;	(1912)	79.1
College of Physicians and Surgeons, Baltimore	(1912)	75
Boston University	(1912)	75
Harvard Medical School, (1882) 75; (1900) 90; (1911) 77.2; (1912) 81.6, 84.1.		
Tufts College Medical School, (1909) 79.2; (1910) 76.2; (1912) 75, 75.7, 76.6.		
College of Physicians and Surgeons, Boston	(1912)	78.2
University of Michigan, Dept. of Med. and Surg.,	(1908)	77.5
Western Reserve University	(1909)	75.9
Hahnemann Medical College of Philadelphia	(1910)	83.1
University of Pennsylvania	(1894)	90
Jefferson Medical College	(1911)	80.7
Medical College of Virginia	(1912)	75
Laval University, Quebec	(1912)	76.1
Nongraduates, 75.9, 78.7, 79, 79.5, 81.2.		

FAILED

Atlanta School of Medicine	(1912)	70.1
Medical School of Maine	(1894)	63.5
Maryland Medical College	(1912) 71.4; (1913)	64.5
College of Physicians and Surgeons, Boston	(1910)	67
Tufts College Medical School	(1912)	72.5
University of Vermont	(1891)	63.7
Nongraduates, 48.2, 57.5, 59.2, 60.5, 61.4, 62.9, 63.5, 63.9, 65.9, 67.3, 71, 72.5, 72.6, 72.7.		

New Mexico April Report

Dr. W. E. Kaser, secretary of the New Mexico Board of Health and Medical Examiners, reports that at the meeting held at Santa Fe, April 14-15, 1913, eleven candidates were licensed on presentation of satisfactory credentials, and one was licensed through reciprocity. The following colleges were represented:

LICENSED ON PRESENTATION OF SATISFACTORY CREDENTIALS

College	Year Grad.	Total No. Examined
Kentucky School of Medicine	(1908)	1
University of Illinois	(1910)	1
State University of Iowa, Coll. of Med.	(1909)	1
St. Louis University	(1908) (1912)	2
Washington University	(1904)	1
University of Buffalo	(1892) (1909)	2
Ohio Medical University	(1897)	1
Jefferson Medical College	(1889)	1
Vanderbilt University	(1908)	1

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Memphis Hospital Medical College	(1910)	Oklahoma

Arkansas Eclectic May Report

Dr. C. E. Laws, secretary of the Arkansas Eclectic Medical Board reports the written examination held at Little Rock, May 13-14, 1913. The number of subjects examined in was 12; total number of questions asked, 120; percentage required to pass, 75. The total number of candidates examined was 20 of whom 18 passed and 2 failed. Four candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Drake University	(1891)	81.2
Eclectic Medical University, Kansas City, (1904) 80; (1911) 80.7; (1913) 76.5, 79.2, 79.7, 80.2, 80.7, 84, 86, 88.		
Eclectic Medical College, Cincinnati, (1890) 81; (1910) 80.5; (1913) 80.2, 85.2, 85.2, 86, 87.2.		

FAILED

Eclectic Medical University, Kansas City	(1913)	54.3, 66.8

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Georgia College of Eclectic Medicine and Surgery,	1912)	Georgia
Eclectic Medical University, Kansas City	(1900)	Oklahoma
American Medical College, St. Louis	(1908)	Oklahoma
Eclectic Medical University, Cincinnati	(1905)	Oklahoma

Book Notices

EXPERIMENTAL PHYSIOLOGY. By E. A. Schäfer, F.R.S., Professor of Physiology, Edinburgh. Cloth. Price, $1.35 net. Pp. 111, with 83 illustrations. New York: Longmans, Greene & Co., 1912.

The methods described in this book of laboratory directions are well calculated to give the best results with the greatest ease of preparation and manipulation. Many of the devices are original. The various pieces of special apparatus are so simple of construction that they can be made in the laboratory shop. The following are particularly interesting mechanisms: 1. Flat steel spring marked at intervals with number of vibrations corresponding to certain length of spring for studying the genesis of tetanus. 2. Simple sulphuric acid and mercury capillary electrometer. 3. Kidney plethysmograph with piston recorder. 4. Spirometer which records on a drum with valves to measure volume of respirations. 5. Drum contact arranged in primary circuit in muscle-curve experiments. 6. Frog heart plethysmograph with record of volume changes on drum. 7. Arrangement of mercury manometer with three-way cock connecting washout reservoir bottle with manometer and arterial cannula, and with the pressure maintained in the reservoir bottle by a bicycle pump. The levers, electrodes and other apparatus are simple and effective. The illustrations are clear and sufficiently numerous to make the work easy and intelligible to the student. The experiments are those usually given to the most advanced type of medical and other scientific students; but by a selection of the simpler experiments, laboratory work can be well arranged for more elementary students.

THE CARE AND TREATMENT OF EUROPEAN CHILDREN IN THE TROPICS. By G. Montagu Harston, M.D., M.R.C.S., L.R.C.P., Ophthalmic Surgeon to the Tung Wa Hospital, Hong-Kong, with an Introduction by Sir Patrick Manson, G.C.M.G., M.D., LL.D. Cloth. Price, $3 net. Pp. 232, with 45 illustrations. New York: William Wood & Co., 1913.

This little book is of great interest to all physicians and intelligent laymen, but of absorbing interest to the pediatrician. The author is a keen observer and a scientific clinician who has had an enormous experience in tropical medicine. From this experience he has written the book in a manner that is clear, comprehensive and fascinating, and always from the comparative point of view of the reader who lives in a temperate zone. The northern physician will be interested in the chapters on kala-azar, oriental sore, Malta and dengue fever, Blackwater fever, frambesia, sunstroke, relapsing fever, etc. Of still greater interest will he find the chapters on the effects of heat, sun, humidity, tropical diet and tropical environment on the physical and mental development, the comparative morbidity and mortality, and the incidence of nutritional, infectious and other diseases of infants and young children that live in the tropics. The book is attractively bound and printed and the illustrations are excellent. This is to be commended warmly as a contribution to tropical medicine, but still more so as a valuable contribution to our American and European pediatric literature.

THE TREATMENT OF DISEASE IN CHILDREN. By G. A. Sutherland, M.D., F.R.C.P., Physician to Paddington Green Children's Hospital. Cloth. Price, $3.75. Pp. 403. New York: Oxford University Press, 1913.

This book is distinctly an English text-book on therapeutics of children. It reflects in every way the teachings of the great British clinicians, Thompson, Still and others, and adds nothing new.

FOOD INSPECTION AND ANALYSIS. For the Use of Public Analysts, Health Officers, Sanitary Chemists and Food Economists. By Albert E. Leach, S.B. Revised and Enlarged by Andrew L. Winton, Ph.D., Chief of the Chicago Food and Drug Inspection, Bureau of Chemistry, U. S. Department of Agriculture. Third Edition. Cloth. Price, $7.50. Pp. 1001, with 159 illustrations. New York: John Wiley & Sons, 1913.

There were many treatises on food analysis, both in this country and abroad, previous to the publication of the first edition of this work in 1904, but since that date Leach's work has been one of the leading authorities on the subject. The general plan of the latest edition remains the same as in preceding ones, but considerable antiquated matter has been replaced by new. Physicians and toxicologists should be interested in the sections devoted to the determination of arsenic, caffein, cocain, saponins and such food preservatives as benzoates, borates, formates and salicylates. It is probable that the work will continue for some time to remain the most comprehensive work on food analysis in the English language.

SURGERY: ITS PRINCIPLES AND PRACTICE. By Various Authors. Edited by William Williams Keen, M.D., LL.D., Emeritus Professor of the Principles of Surgery, Jefferson Medical College, Philadelphia. Volume 6. Cloth. Price, $7 net. Pp. 1177 with 519 illustrations. Philadelphia: W. B. Saunders Company, 1913.

The appearance of a sixth volume to this work shows that the editor is alert to the needs of the situation. Much of the matter in text-books on surgery becomes old almost as soon as it is off the press; hence it was a happy thought of the editor to supplement the other volumes with a sixth, thus bringing many subjects up to date and adding much new matter that has developed since the work was completed. A complete index adds much to the value of the work.

Medicolegal

Validity of Arrangements between County and City for Care of Small-pox Patients

(Mayor and Council of City of Macon vs. Bibb County (Ga.), 75 S. E. R. 435)

The Supreme Court of Georgia holds that by virtue of Sections 1633, 1646, 1670 of the Civil Code of Georgia of 1910 municipalities and counties are empowered to establish hospitals and pesthouses for persons afflicted with small-pox, the house established by the municipality being for the care and detention of those within the city limits, and the county pesthouse being for the care of those who reside in the county, but outside of the municipality. Where a municipality, instead of maintaining its own pesthouse, combines with the county for the treatment of its patients at the county's pesthouse, on the basis that the expense is to be apportioned between the municipality and the county according to the number of patients from the city and the county, the city will not be absolved from its obligation to pay its share of the expense, on the ground that the county's pesthouse is maintained by revenue derived from taxes laid on residents of the entire county.

Where a county, by written proposal, offers to receive, care for, and treat, at the county pesthouse, persons afflicted with small-pox, who are residents of the city, on the basis that all expenses connected with the operation of the county pesthouse shall be apportioned between the city and county according to the number of inmates coming from the city and county, and the city shall pay its share monthly, and that the arrangement is to be terminable on thirty days' notice by either party, which proposition is accepted by the city, and where the city in subsequent years, during the pendency of the arrangement, sends small-pox patients to the county pesthouse, which patients are cared for according to the terms named in the county's proposal, the city will not be relieved from the payment of its proportionate expense, on the ground that the arrangement of the city and county to combine the pesthouses is void, because, as contended, its effect is to create a debt extending beyond the current year, and to bind the successors in office of the city.

Causes of Insanity and Insanity as a Defense to Crime

(Litchfield vs. State (Okla.), 126 Pac. R. 707)

The Criminal Court of Appeals of Oklahoma says that insanity is one of the most mysterious diseases to which human beings are subject. It has its origin from a thousand different causes. Sometimes it results from intense religious excitement. At other times it grows out of sickness or a

personal injury. It may be hereditary, and often cannot be explained. The records show that grief, sorrow or shame resulting from the disruption of domestic relations or loss of virtue by a female relative constitute a most prolific source of insanity. Voluntary intoxication is neither a defense nor a mitigation for the commission of crime, but an act by one who is suffering from delirium tremens which is a result of intoxication is not punishable by law. Why? Because delirium tremens is involuntary, and is recognized by all authorities as a species of insanity. If a man kills another as a matter of revenge or anger on account of some insult or injury done to a female relative, such killing will not be justifiable or excusable, but will be either murder or manslaughter, according to the circumstances under which it is committed. But, if a man kills another while insane, the killing is excusable, although the insanity may have been the result of grief, shame or shock caused by an insult or injury to a female relative of the party doing the killing. In other words, it matters not what the cause of the insanity may be. If such insanity exists, it is a complete defense to the commission of crime. The issue of insanity when applicable to the evidence should be submitted to the jury, and they alone should be the judges as to the good faith of this defense. Every defense is liable to be abused, but this is no reason why any legal defense should not be submitted to a jury.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Medical Sciences, Philadelphia

June, CXLV, No. 6, pp. 781-936

1 *Clinical Observations Concerning Twenty-Seven Cases of Splenectomy. H. Z. Giffin, Rochester, Minn.
2 *Administration of Ox Bile in Treatment of Hyperacidity and of Gastric and Duodenal Ulcer. F. W. Palfrey, Boston.
3 Intestinal Bacteria in Pellagra. W. J. MacNeal, New York.
4 Rational Treatment of Tetanus, with Report of Twenty-Three Cases. A. P. C. Ashhurst and R. L. John, Philadelphia.
5 Cancerous Changes in Benign Tumors of Skin. R. L. Sutton, Kansas City, Mo.
6 *Use of Antityphoid Vaccine During Epidemic of Typhoid. C. J. Hunt, Harrisburg, Pa.
7 Cases of Actinomycosis. F. E. McKenty, Montreal.
8 *Hema-Uro-Chrome: New Laboratory Test for Cancer and Sarcoma. T. G. Davis, Los Angeles.
9 Psychosis Following Carbon Monoxid Poisoning, with Complete Recovery. M. O'Malley, Washington, D. C.
10 Acute Polymyositis. H. Fox, Philadelphia.
11 *Clinical Importance of Reflex Phenomena in Intrathoracic Diseases, Nervous Mechanism and Diagnostic Limitations of Regional Muscle Changes in Pulmonary Tuberculosis. J. L. Pomeroy, Monrovia, Cal.

1. See abstract No. 89 in THE JOURNAL, April 19, 1913, p. 1262.

2. **Ox Bile in Treatment of Hyperacidity.**—Palfrey believes that there is reason to suspect that in hyperacidity and in gastric and duodenal ulcer the symptoms are at least in part due to delay in the neutralization of the acid contents discharged into the duodenum. The administration of ox-bile pills (salol coated) by the mouth should theoretically correct this fault. Empirically such administration of ox-bile has seemed to be of service in the relief of pyrosis and pain after eating; it has been followed by improvement in cases of gastric and of duodenal ulcer.

The treatment was as follows: A general diet list was given merely to avoid clearly unsuitable foods; this was regarded by the experienced patients as a generous one. A caution against overeating was given, and stress was laid on thorough mastication to insure prompt action on the food by the gastric juice. The ox bile was given in pills prepared according to the directions of Pfaff, each containing 0.25 gram of dried and pulverized ox bile, salol coated to conceal the taste and to prevent dissolution in the stomach. Two or three of these pills were given after meals three times a day for a week, after which, as a rule, the number was reduced. In some instances where the appetite was not good, or where there was other reason to suspect that the gastric secretion was not always active, dilute hydrochloric acid and tincture of nux vomica, of each 8 minims, were given in water before meals, and for temporary relief sodium bicarbonate and milk of magnesia were recommended to the few patients not already familiar with them. Aside from these measures, and laxatives when needed for constipation, the daily life of the ambulatory patients continued as before, and in the less numerous cases in bed on account of hematemseis or other severe symptoms as little other treatment was given as possible. The results of this treatment were such as to lead the author to the belief that they could not be explained by the general directions given, but must be laid to the influence of the bile. In practically all cases followed the patients described a satisfactory improvement beginning within a few days, and at the end of a week or ten days gave a highly favorable report of their condition.

6. **Antityphoid Vaccine.**—The conclusions drawn by Hunt from the studies made in one epidemic indicate the little value antityphoid vaccine has in limiting the number of cases and in modifying the process in the individual case. It would seem since antityphoid serum confers relatively a more immediate and fairly strong immunity that a serum would be of some advantage during such an epidemic. The use of vaccine should be limited to those not already infected; that is, to prevent secondary cases. To this end the individual history and diagnosis by culture would determine its use.

8. **Hema-Uro-Chrome.**—The bile acids and coloring were obtained by Davis in a concentrated form by the following original method. To 100 c.c. urine in a flask of about 150 c.c. capacity add 10 c.c. hydrochloric acid; heat over a slow fire until ebullition begins. Remove from the fire and when cool add 30 c.c. ether. Agitate occasionally by turning the flask, avoiding hard shaking, which interferes with removal of the ether. After about twelve hours remove the ether into a clean white dish; allow it to evaporate spontaneously, when the bile acids and coloring matter will be left on the bottom of the dish. The bile acids may be converted into salts by the addition of a small amount of a 1 per cent. solution of sodium acid-carbonate (bicarbonate) in water and the several tests applied. Davis recommends Torquay's test, which is a recently prepared solution of methyl violet, 1 to 2,000 of water (Practically one drop of the saturated alcoholic solution in an ounce of water.) Two tubes of equal size are partly filled with this solution; to one is added a small amount of the above solution of bile, which discharges the blue tint leaving the red. Comparison of the tubes renders the color change very distinct. Indican if present will be seen on the white dish as a ring above the bile acids and coloring. After chloroform or ether anesthesia acicular crystals of ammonium chlorid will be deposited and in some pathologic conditions cystin and fatty substances found.

During the use of this method Davis would occasionally find the ether pink, even red in color and on evaporation a more or less heavy deposit of hematin would be seen above the indican and constituents of bile. Observations extending over more than four years lead him to think that this pink coloration may occur to a slight degree in diseased conditions of the liver when the hepatic cells are unable to convert the product of the lysis of erythrocytes into bile acids and coloring substances; therefore it occurs in cholemia from any cause and in jaundice, especially the hematogenous form. It will be found when the urine contains red blood-cells from any cause, whether acute nephritis or hemorrhage, from some portion of the urinary tract. These may be differentiated by the microscope and removed before further testing. The pink tint appears due to a cleavage product of hemoglobin, probably hematin, and is present in larger amounts in the several infectious fevers, malaria in all its forms, greater in the severe types, as in the "tick-fevers" of Central America and Mexico, in babesia, piroplasmosis, etc. Hematin will be present in the urine of the anemias associated with tapeworm,

uncinariasis or hookworm, and other intestinal parasites. It will be present in greater amount in the anemias due to disease of the blood-making organs, and in the essential anemias due to near malignant disease of the lymph-nodes and ductless glands, especially in hyperthyroidism and in splenic, myelogenous and pernicious anemia, the hematin being in proportion to the destruction of erythrocytes. While the tint and depth of color will vary with the proportions of bile, indican, hematin and urochrome present, by far the greatest amount and intensity of color obtained by the process described was found in the urine of patients suffering from malignant disease, cancer and sarcoma. Davis has never found it absent in cases of cancer or sarcoma even when of small size or unsuspected.

11. **Reflex Phenomena in Intrathoracic Diseases.**—The various reflex phenomena occurring in pulmonary tuberculosis and muscle spasm and degeneration over the chest and neck Pomeroy regards as part of a complex which results mainly from a segmental disturbance through the thoracic sympathetic ganglia to the cord; but also irritation of the phrenics, the vagus, the brachial plexus and the intercostals as well, unquestionably are factors in the presentation of the clinical picture. A localized neuritis from the tubercle toxin is also a possibility, while an actual diffusion of toxin in the area over the inflamed lung can only be surmised. There seems to be some definite relation between the diseased lung area and the muscle changes as well as the sensory electric reaction and trophic phenomena; the rigidity indicates activity of a recent nature, while regional degeneration indicates chronicity or destructive changes. Apparently no explanation seems more justifiable than that of a segmental disturbance after Head's generalizations.

Archives of Internal Medicine, Chicago

June, XI, No. 6, pp. 565-684

12 *Histopathology of Nervous System in Pellagra. H. D. Singer and L. J. Pollock, Kankakee, Ill.
13 *Blood-Pressure Variations as Influenced by Rapid Changes in Altitude. Study of 100 Normal Men. F. E. Clough, Lead, S. D.
14 *Superpermeability in Nephritis. W. A. Baetjer, Baltimore.
15 *Acute Unilateral Nephritis, with Report of Case. D. Riesman and G. P. Müller, Philadelphia.
16 *Effect of Uranium Nephritis on Excretion of Creatinin, Uric Acid and Chlorids, and Effect of Creatinin Injections During Uranium Nephritis. W. M. Kraus, New York.
17 *Case of Auricular Fibrillation with Post-Mortem Examination. A. E. Cohn and J. D. Heard, Pittsburgh.
18 *Relation of Heart-Block to Lesions of Auriculoventricular Bundle, with Report of Case. H. E. B. Pardee, New York.
19 *Classification of Nephritis. H. Oertel, New York.
20 *Etiology and Treatment of Hemoglobinuric Fever. C. Lovelace, Waco, Texas.

12. **Nervous System in Pellagra.**—The authors state that there is present in the acute attack of pellagra and in the interval cases a picture compounded of acute and chronic types of reaction. The acute changes include direct and indirect chromatolysis of nerve cells, satellitosis, astrocytosis and the presence of ameboid glia cells. Under this heading would also come a very moderate amount of perivascular infiltration which indicates general intoxication. The perivascular infiltration of the acute attack is not more marked than that found in the interval cases. This might be used as a further argument against an acute local infection of the nervous system during the acute outbreak of the disease. The chronic changes include fatty and fibrinoid degenerations, chronic Nissl changes of the nerve cells, increase of glia fibers, regressive changes of the glia cells, permanent destruction of nerve fibers and a marked increase of amyloid bodies. Chronic vascular changes were found only in cases of chronic alcoholism and senility.

In addition to these changes, especial emphasis should be laid on the constant presence in all cases examined where death had ensued during or soon after an acute attack of pellagra, of the reaction known as central neuritis. Furthermore, this type of change was found to have almost entirely disappeared in two patients dying eighteen months after an attack, while still definitely present, though in a mild degree, in a third patient dying three and one-half months after such an attack. It would therefore appear that the acute attack of pellagra is often, if not always, accompanied by some general intoxication of special kind which disappears in some, if not all, cases in which recovery occurs. It must not be forgotten, however, that a similar reaction is found in diseases other than pellagra.

13. **Blood-Pressure Variations Influenced by Rapid Changes in Altitude.**—Clough found that the rapid change in altitude, either up or down, was responsible for a fall in blood-pressure of approximately 5 mm. Lower readings were obtained from the decade from 30 to 40 than from 20 to 30. It was impossible to forecast by a man's build or any other factor what influence the ride would have on his blood-pressure. It was demonstrated that after a day's work 1,700 feet below the surface the average blood-pressure was about the same as on the surface before starting to work. It was demonstrated that abnormally high blood-pressure was not a contra-indication to hard work under ground. Admitting that the standing position is responsible for an increase of from 4 to 8 mm., these readings show that there is little difference between sea level readings (Thayer's) and those taken a mile above the sea. As factors influencing some of these higher readings, there must be taken into account the facts that the readings were taken in the standing position, that the men were, for the most part, heavy users of tobacco, tea and coffee, and moderate users of alcoholic beverages. Only one or two men seemed to be nervous at the time of the examinations.

14. **Superpermeability in Nephritis.** — Baetjer emphasizes some of the features which have been most striking in his study of cases:

1. That there exist cases of well-marked nephritis with evidence of impairment of renal function in which certain tests reveal an eliminative power normal or even above normal. 2. That these cases may be more common than we have hitherto supposed, judging from an experience of four such examples in several months. 3. That the evidence from these suggests that there may exist in some types of nephritis a stage in which the kidney is hyperpermeable, at least to some substances used for functional tests, with an elective impermeability for chlorids as suggested by Widal. 4. That it is necessary to study renal function from the standpoint of a considerable series of functional tests rather than to draw conclusions from the excretion of any one drug.

15. **Acute Unilateral Nephritis.**—A woman, aged 22 years, was seized with sudden pain in the left loin, radiating forward into the left hypochondrium; rigidity of lumbar muscles with tenderness in costovertebral angle; fever, rapid pulse; leukocytosis; in urine albumin, hyaline and granular casts, red blood-cells and pus-cells. Patient moderately septic; nephrectomy; kidney the seat of disseminated, suppurative nephritis. Patient made a good recovery although some weeks later it was necessary to remove the submaxillary gland for calculous inflammation.

16. **Effect of Uranium Nephritis on Excretion of Creatinin.**—Kraus summarizes his paper as follows:

1. In acute uranium nitrate nephritis, (1) creatinin is excreted in decreased amounts, and (2) uric acid is excreted in increased amounts. 2. In subacute uranium nitrate nephritis, (1) creatinin is excreted in decreased amounts (two weeks), but (2) uric acid and (3) chlorids are excreted in increased amounts (two weeks). 3. Creatinin injected in normal dogs is excreted "in toto." 4. Creatinin injected in acute uranium nephritis causes (1) endogenous and (2) injected creatinin, (3) uric acid, (4) chlorids and (5) water, to be excreted in decreased amounts; (6) death may ensue. 5. Creatinin injected in subacute uranium nephritis is excreted "in toto," and apparently does not affect the excretion of endogenous creatinin, uric acid, chlorids or water since these are unchanged.

17. **Auricular Fibrillation.**—A case is described by Cohn and Heard, in which, while the patient was under observation, a sequential rhythm changed to complete irregularity of the cardiac mechanism, due to auricular fibrillation. It is extremely doubtful whether the one-half dram of digitalis which the patient received could have been responsible for the altered rhythm, even if she had been given the drug before admission to the hospital, five days before. Neither can the fall in ventricular rate from 120 to 80, occurring with the onset of fibrillation, be ascribed to an administration of digi-

talis extending over only half a day. The fall in rate occurring with the onset of auricular fibrillation is difficult to explain, but it occurs in other conditions of which we have only slight knowledge. The action of strophanthin administered intravenously was studied and showed a strikingly beneficial effect on the circulation and the subjective symptoms of the patient. The post-mortem examination showed a lesion of the sino-auricular node, but it cannot be definitely asserted that a relation exists between the lesion described and the clinical irregularity that was studied.

18. **Heart-Block and Lesions of Auriculoventricular Bundle.**—A patient with aortic and mitral insufficiency and normal heart action developed complete heart-block and died. Autopsy showed a streptococcus endocarditis superposed on a chronic process of the aortic valve which had involved the substance of the heart. The auriculoventricular bundle had been destroyed for one-half of its transverse section by the chronic process, but this, so far as known, had never produced heart-block. Complete heart-block was produced by an involvement of the auriculoventricular system throughout its whole extent in an acute inflammation. The extent of the lesion of the bundle in the cases which have been previously reported is contrasted with the degree of heart-block which was present at death. It is concluded by Pardee that the extent of the anatomical changes is not the only factor which induces heart-block. Bacterial and metabolic toxins and deficient local blood-supply are suggested as accessory factors which, in certain circumstances, might act alone.

19. **Classification of Nephritis.**—It is Oertel's belief that with growing knowledge and necessarily growing differences of opinion in regard to the exact place of diseases, classification by groups will become the best means to serve the more general needs of the physician without interfering with the necessary freedom of thought and opinion of the scientific investigator. He accordingly draws the following sketches: 1. The group of simple nephritis, in which occurs cloudy swelling and parenchymatous degeneration, inflammatory edema and serous exudate, associated at times by desquamation and inflammatory proliferation of parenchyma cells. Restitution to integrity. 2. The group of degenerative and exudate nephritis, destructive in character; represented by marked and extensive degeneration and necrosis of parenchyma cells, cellular exudate, occasionally, with hemorrhages into glomeruli, periglomerular and intertubular tissue and into tubules. Proliferation of parenchyma cells in glomeruli and tubules, abundant cast formation. The predominating feature may exist either on the degenerative or exudative side. 3. The group of degenerative and productive nephritis, destructive and constructive in character; with prominent degenerative, largely fatty changes, much slighter and frequently more localized exudative processes, proliferation of parenchyma cells with the formation of epithelial giant cells, cast formation, appearance of leukocytoid and fibroblastic cells, loss and collapse of glomeruli and tubules, gradual formation of mature fibrous tissue overgrowing wasted and wasting parts, first patchy, then more diffuse. Occasional hemorrhages. Thickening of renal arteries, occasional formation of infarcts.

4. The group of productive nephritis, associated with a marked reconstruction of kidney cells and architecture. (a) Diffuse: With less violent but general degeneration and loss of parenchyma and glomeruli by inflammatory obliteration. Marked regeneration of flat and syncytial-like tubular epithelium with marked distortion of the tubules, and associated abundant irregular overgrowth of connective tissue. Arteriosclerosis of kidney arteries usually prominent; infarct formation occasional. (b) Focal and patchy: Characterized early by a hyaline swelling and fatty degeneration of intima and endothelial cells of the small renal vessels and capillaries, associated with cellular interstitial and periglomerular cell foci and focal parenchymatous degeneration. All of these acquire gradually more momentum, but the involvement of the small vessels remains most conspicuous. It leads to obliteration of their lumen, thereby adding quantitative to the qualitative disturbance. Thus results collapse of affected parts, the extent of which necessarily varies, so that at times the superficial appearance of the kidney may be only very finely granular. The extent of new connective tissue formation is also correspondingly irregular, usually most pronounced around Bowman's capsule. The tubules are relatively well preserved until late in the disease, and epithelial desquamation is insignificant. The disease is usually accompanied by arteriosclerosis of the kidney arteries.

20. **Etiology and Treatment of Hemoglobinuric Fever.**—A study of 514 cases convinces Lovelace that there exists a deplorable confusion as to the cause and treatment of blackwater fever. So far as may be indicated by this series of 514 cases, malarial infection stands in a direct causal relation to blackwater fever. Blackwater fever is not due to a particular species of malarial parasite. Quinin, in large or small doses, was, in this series, an invariable antecedent of the hemoglobinuric condition.

Under no circumstances, says Lovelace, should quinin be given to a blackwater fever patient during the period of hemoglobinuria, nor for several days thereafter. The effect of the paroxysm of hemoglobinuria is, itself, that of a drastic, but temporary, therapeutic agent, decimating the malarial parasites in the patient's blood much as a single intravenous injection of salvarsan decimates the spirochetes of syphilis in the lesions of that disease. Quinin, cautiously begun, will be necessary, but it should not be begun until several days after the urine has become free from hemoglobin. Measures which sustain the blood-pressure are urgently indicated during the period of hemoglobinuria. Of these, normal saline solution given by bowel, subcutaneously, or intravenously, is chief. Digitalis and caffein are of decided value. The prophylaxis of malaria is the prophylaxis of blackwater fever.

Biochemical Bulletin, New York

January, II, No. 6, pp. 211-332

21 Differential Chemical Study of Glucoses from Case of Pancreatic Diabetes. F. Landolph, Buenos Aires.
22 Detection of Aceto-Acetic Acid by Sodium Nitroprussid and Ammonia. V. J. Harding and R. F. Ruttan, Montreal.
23 Ortho-Toluidin as Indicator for Occult Blood. R. F. Ruttan and R. H. M. Hardisty, Montreal.
24 Synthetic Properties of Emulsin. V. K. Krieble, Montreal.
25 Nicotinic Acid in Rice Bran. U. Suzuki and S. Matsumaga, Tokyo.
26 Study of Influence of Cancer Extracts on Growth of Lupin Seedlings. J. Rosenbloom, New York.
27 Biochemistry of Female Genitalia. T. A. Erpf-Lefkovics and J. Rosenbloom, New York.
28 Idem. J. Rosenbloom, New York.
29 Department of Biochemical Research at Vineland, N. J. A. W. Peters, Vineland, N. J.
30 Biochemistry in New York Twenty Years Ago. E. E. Smith, New York.
31 Immunity in Some of Its Biochemical Aspects. C. F. Bolduan, New York.
32 Plan for Organization of American Biological Society. A. P. Mathews, Chicago.

Boston Medical and Surgical Journal

June 12, CLXVIII, No. 24, pp. 865-900

33 Psychology and Physiologic Sciences. R. MacDougall, New York.
34 Digestivity of Human Gastric Juice Compared to Digestivity of Various Remedies Recommended in Disorders of Stomach. G. H. Nofer, Philadelphia.
35 So-Called Binasal Hemianopsia in Brain Tumor. W. B. Lancaster, Boston.
36 Diagnostic Evidence Obtained by Roentgenoscopy from Lateral Aspect of Skull with Special Reference to Base and Its Adnexa. P. Brown, Boston.
37 Social Pediatrics. I. S. Wile, New York.

June 19, CLXVIII, No. 25, pp. 901-940

38 *Diabetes Insipidus and Polyuria of Hypophyseal Origin. H. Cushing, Boston.
39 Diagnosis and Treatment of Diphtheria. J. B. Greene, Asheville, N. C.
40 *Seventeen Patients with Pulmonary Tuberculosis Treated by Artificial Pneumothorax. H. L. Barnes, Wallum Lake, and F. T. Fulton, Providence, R. I.
41 Method of Supervision in Medicine. W. T. Carolin, Lowell, Mass.
42 Tuberculosis of Epididymis: Its Effect on Testicle and Prostate. J. D. Barney, Boston.
43 Case of "Syphilitic Periostitis" Cured by Salicylates. E. H. Goodman, Philadelphia.

38. **Diabetes Insipidus and Polyurias of Hypophyseal Origin.**—Cushing summarizes his experimental data on this subject as follows:

1. The infundibular lobe contains, in addition to the substance capable of glycogenolysis, a chemical body or hormon capable of eliciting diuresis. 2. Under certain operative conditions which entail posterior lobe manipulations there often occurs a diuretic response, and occasionally an extreme polyuria, whereas a temporary diminution in the excreted urine is apt to follow other operative procedures, requiring an equally long anesthetization. 3. Posterior lobe implants may cause a temporary polyuria, which subsides on the removal of the implanted tissue. 4. Stimulaion of the autonomic system of nerves to the gland elicits diuresis. 5. Certain operative procedures, such as separation of the infundibular stalk, and occasionally a simple posterior lobe excision, may call forth a somewhat prolonged polyuria. Certain clinical observations, coupled with the experimental data which have been assembled, suggest not only that,

The emotional polyurias are in all likelihood the expression of a neurogenic discharge of hypophyseal secretion, but also that, the clinical polyurias of longer duration are in many instances merely the symptomatic expression of an internal secretory disturbance brought about by injury or disease involving the hypophyseal neighborhood. Hence, whether or not there actually proves to be a form of polyuria of primary renal origin, our present conceptions of so-called diabetes insipidus need to be recast, with especial reference to the factor of the secretory activity of the pituitary body and particularly of its posterior lobe.

40. **Artificial Pneumothorax in Pulmonary Tuberculosis.**—The conclusions the authors draw from their investigation are as follows:

In genital tuberculosis the epididymis is the primary focus in the vast majority. Tuberculosis of the epididymis becomes bilateral in 41.6 per cent. of all cases and becomes so within six months of the time of involvement of the first side in 30 per cent. The prostate and vesicles are found to be infected in 75 per cent., this infection occurring in the first six months in 30 per cent. and in the first year in 54 per cent. It is also shown that this infection takes place quite as often in the presence of unilateral, as of bilateral epididymitis. The urine is pathological in 43 per cent. of all cases; bladder irritability is found in 35 per cent. and in about half of these it occurs in the first six months. In 33 per cent tuberculosis, past or present, of organs other than those of the genito-urinary tract, is to be expected. The lungs are most often attacked. Clinical observation shows tuberculosis of the testicle in 44 per cent., but the pathologist finds the disease in 66 per cent., and of these 53 per cent. are found infected within six months of the onset of the epididymitis. The records of sixty-seven epididymectomies show that no case has yet returned for orchitectomy. The radical operation is, therefore, rarely necessary Infection of the first and second epididymis, as well as of prostate and vesicles, seems to be by the blood or lymphatic streams, but it cannot be denied that in some, infection takes place through the vas by an ascending or descending process. The operative mortality of 147 cases is 2.72 per cent., a general miliary tuberculosis being the most common cause of death. As it has been shown that the infection may become wide-spread in the first six months of the disease operation at the earliest possible date is strongly indicated.

California State Journal of Medicine, San Francisco

June, XI, No. 6, pp. 211-252

44 Effects of Athletics on Young People. H. D. Power, San Francisco.
45 Thoracic Esophagectomy: Report of Case. J. H. Barbat, San Francisco.
46 Suggestions for Mental Hygiene. G. V. Hamilton, Santa Barbara.
47 Present Status of Prostatic Surgery. C. D. Lockwood, Pasadena.
48 Lingual Tonsil and Some of Its Diseases. W. H. Dudley, Los Angeles.
49 Absence of Brain Tumor Symptoms in Cases of Tumors of Brain. W. F. Beerman, San Francisco.
50 Hypersensitiveness to Homatropin. D. W. Montgomery, San Francisco.
51 Raynaud's Disease: Report of Case. L. S. Mace, San Francisco.
52 Sublimate Poisoning: Case Report. F. F. Gundrum, Sacramento.
53 Case of Angioneurotic Edema Cured by Injections of Horse Serum. F. Williams, San Francisco.

Journal of Biological Chemistry, Baltimore

June, XIV, No. 5, pp. 433-570

54 Blood Relationship of Animals as Displayed in Composition of Serum Proteins. J. H. Woolsey, San Francisco.
55 *Theory of Diabetes: Sarcolactic Acid in Diabetic Muscle. R. T. Woodyatt, Chicago.
56 Absorption of Nitrogenous Products. O. Folin and W. Denis, Boston.
57 Tyrosin Content of Proteins. O. Folin and W. Denis, Boston.
58 *Influence of Bases on Rate of Oxidations in Fertilized Eggs. J. Loeb and H. Wasteneys, New York.
59 Important Chemical Difference between Eggs of Sea Urchin and Those of Star-Fish. A. P. Mathews, Woods Hole.
60 Influence of Hypertonic Solution on Rate of Oxidations in Fertilized and Unfertilized Eggs. J. Loeb and H. Wasteneys, New York.
61 Do Gliadin and Zein Yield Lysin on Hydrolysis? T. B. Osborne and C. S. Leavenworth, New Haven, Conn.
62 *Influence of Fever on Elimination of Creatinin. V. C. Myers and G. O. Volovic, New York.
63 Normal Protein Metabolism of Rat. O. Folin and J. L. Morris, Boston.
64 *Is Narcosis Due to Asphyxiation? J. Loeb and H. Wasteneys, New York.
65 Chemistry of Gluconeogenesis. A. I. Ringer, E. M. Frankel and L. Jonas, Philadelphia.
66 Action of Leukocytes on Hexoses. P. A. Levene and G. M. Meyer, New York.
67 *Theory Concerning Intermediary Metabolism of Carbohydrates and Proteins. H. D. Dakin and H. W. Dudley, New York.

55. **Sarcolactic Acid in Diabetic Muscle.**—Muscles of glycogen-free animals form some sarcolactic acid (about 30 per cent. of the normal). This lactic acid, Woodyatt says, cannot come from glycogen but must arise from preformed sugar, or directly from certain amino- or fatty-acids. The muscle of a case of severe human diabetes formed even less lactic acid than that of fully phlorhizinized dogs. This suggests to Woodyatt an impaired power to dissociate glucose on the part of the diabetic muscle since such muscles are bathed with an abnormally high quantity of sugar which—if available—should yield more lactic acid than is found in the muscle of phlorhizin diabetes. With D: N ratios of approximately 3.65:1, post-mortem analyses of dog muscles and livers show no glycogen. With ratios of 2.8 or 3.0:1 this is not necessarily the case, and one cannot assume that with a constant D: N ratio of 2.8:1 an animal is free from glycogen.

58. **Oxidations in Fertilized Eggs.**—It is shown by the authors that bases influence the rate of oxidations differently in the fertilized and unfertilized egg of *Strongylocentrotus purpuratus*. Strong bases, like NaOH and $N(C_2H_5)_4OH$, accelerate the rate of oxidations in the fertilized egg of *S. purpuratus* only if their concentration is above $10^{-3}N$; this concentration suppresses the phenomena of development of the egg. Weak bases, like NH_4OH and methylamin, accelerate the rate of oxidations in the fertilized egg only slightly; the reason being that the weak bases are too slightly dissociated to produce in the concentrations admissible in the experiment the injurious (etching?) effects which the highly dissociated bases produce in this case. The authors do not believe, however, that these facts do not warrant any conclusion concerning the localization of the normal processes of oxidation in the egg.

62. **Effect of Fever on Creatinin Elimination.**—Myers and Volovic found that the excretion of creatinin closely follows the rise in temperature during fever, whether the hyperthermia is of infective origin or artificially induced. The highest continued temperature (about 42 C.) has been found to be accompanied by the highest creatinin elimination. In nine experiments on rabbits inoculated with *Bacillus suipesticus*, the percentage increase at the height of the fever over the control elimination averaged 36 per cent. In three experiments, where hyperthermia was artificially induced, the average increase was 34 per cent. This is believed to show that the increased elimination of creatinin is due entirely to the hyperthermia. The view is expressed that the increased creatinin elimination during fever still represents the normal endogenous metabolism, which is proceeding here at an abnormal intensity due to the high temperature. It is possible that this is in accord with the law of the increased velocity of chemical reactions at increased temperatures. It is suggested that the amount of the increased creatinin excretion may be of value in indicating the increase in nitrogenous metabolism due to simple pyrexia. The increased excretion of nitrogen in physiologic fever corresponds very well with the increased excretion of creatinin (35 per cent.), but in toxic fevers, the excretion of nitrogen may be much greater. In the series of toxic fevers, creatin was generally found to be excreted, and when present was observed, as a rule, following the crisis of the fever. In the series of physiologic fevers an elimination of creatin was not

detected. It is reasonable to believe that creatin is excreted during fever, because the protein is drawn on to supply unusual demands (e. g., to supply energy in the absence of carbohydrate), and in this abnormal catabolism, creatin is set free more rapidly than the body can oxidize it. In fever, creatinin, though increased, still appears to indicate the amount of a certain type of normal endogenous metabolism, while creatin possibly indicates the amount of abnormal endogenous metabolism.

64. **Is Narcosis due to Asphyxiation?**—It is shown by the authors that chloral hydrate, ethyl urethan, chloroform and various alcohols produce complete narcosis in the fertilized eggs of the sea urchin without practically lowering the rate of oxidations in the egg.

67. **Metabolism of Carbohydrates and Proteins.**—It is shown by Dakin and Dudley that by a suitable choice of experimental conditions it is possible to convert at low temperatures *a*-amino- and *a*-hydroxy-acids into *a*-ketonic aldehydes. Lactic acid and alanin for example, yield methyl glyoxal. Methyl glyoxal is acted on by enzymes named "glyoxalases," present in the animal body, with formation of both *d*- and *l*-lactic acid. When given to the glycosuric animal methyl glyoxal and both *d*- and *l*-lactic acids yield glucose. Methyl glyoxal is believed, therefore, to be an intermediate product in the mutual interconversion of alanin, lactic acid and glucose. The relationship in the living cell between alanin, lactic acid, methyl glyoxal and glucose is believed to constitute a delicately adjusted equilibrium concerned with the maintenance of approximate neutrality. The view is advanced that *a*-ketonic aldehydes may represent the first step in the metabolism of amino-acids, and that the formation of these substances furnishes an adequate explanation of the origin of *a*-ketonic acids from *a*-amino-acids. Furthermore it affords an explanation of the fact that *a*-hydroxy-acids are not obligate steps in the catabolism of most *a*-amino-acids. The relation of *a*-ketonic aldehyde formation is discussed in connecton with the mechanism of glucose production in the glycosuric animal, with the synthesis of pyrimidin derivatives, and in connection with the mechanism of alcoholic fermentation.

Kentucky Medical Journal, Bowling Green

June 1, XI, No. 11, pp. 427-496

68 Will Friedmann's Serum Cure Tuberculosis? J. Glahn, Owensboro.
69 *Fractures. J. G. Sherrill, Louisville.
70 *Serotherapy for Cerebrospinal Meningitis. D. K. Clark, Louisville.
71 *Management of Placenta Praevia. W. B. Gossett, Louisville.
72 Management of Puerperal Eclampsia. W. B. Moore, Cynthiana.
73 Practical Nurse. J. O. Jenkins, Newport.
74 *Diagnostic Errors in Diseases of Children. R. H. Moss, Henderson.
75 *Vaccine Therapy. J. H. Blackburn, Bowling Green.
76 Indications for Removal of Tonsils, with Consideration of Some Results of Total Extirpation. J. M. Ray, Louisville.
77 Unexplained Pyrexias of Early Childhood. W. A. Jenkins, Louisville.
78 Care of Newborn. T. A. Frazer, Marion.
79 *Passing of Destructive Operations in Obstetrics. E. Speidel, Louisville.
80 *Perinephritis. W. L. Cash, Princeton.
81 Present Status of Subconjunctival Injection. C. T. Wolfe, Louisville.
82 Subparietal Rupture of Kidney with Report of Cases. A. H. Barkley, Lexington.
83 Early Diagnosis of Arteriosclerosis. W. C. Ussery, Paris.
84 Sanitary Problems of School Children. W. P. Drake, Bowling Green.
85 Something about Maxillary Antrum. A. O. Pfingst, Louisville.
86 Five Cases of Intracapsular Fracture of Femur. J. L. Atchison, Campbellsville.
87 Two Cases of Typhoid Infection of Appendix. S. H. Ridgway, Shepherdsville.
88 Malignant Tumors, Recent Advances as to Indications for Treatment. N. Evans, Murray.

69 and 75. Abstracted in THE JOURNAL, November 30, p. 1998.

70, 71, 74, 79 and 80. Abstracted in THE JOURNAL, November 23, pp. 1917 and 1918.

Laryngoscope, St. Louis

May, XXIII, No. 5, pp. 561-640

89 Esophageal Tuberculosis. L. B. Lockard, Denver.
90 Obliteration of Mastoid Excavation by Implantation of Tissue-Flap Taken from Temporal Muscle. S. Iglauer, Cincinnati.
91 Decompression for Relief of Disturbances of Auditory Apparatus of Intracranial Origin. W. P. Eagleton, Newark, N. J.
92 Resonators, with Special Reference to Schaefer Apparatus. R. Sonnenschein, Chicago.
93 Some Original Endoscopic Methods. R. H. Johnston, Baltimore.
94 Foreign Body (Instrument) in Sphenoid Sinus. I. M. Heller, New York.

Maine Medical Association Journal, Portland

June, III, No. 11, pp. 1355-1392

95 Problems of Obstetric Practice. W. W. Chipman, Montreal.
96 Morphinism: Its Probable Pathology and Rational Treatment. H. B. Webster, Castine.

Medical Record, New York

June 14, LXXXIII, No. 24, pp. 1059-1104

97 Results from Vaccination against Tuberculosis (von Ruck's Method.) C. A. Julian, Thomasville, N. C.
98 Ambard's "Uremic Constant," or Estimation by Mathematics of Functional Value of Kidneys. C. K. Austin, Paris, France.
99 Roentgenoscopic Examinations vs. Clinical Methods in Diagnosis of Gastric Disease. J. D. Dunham, Columbus, O.
100 Importance of Adopting a More Accurate Method of Examination for Color-Blindness. J. A. Nydegger, Baltimore.
101 Glycosuria and Bulgarian Bacillus. S. H. Blodgett, Boston.
102 Some Clinical Features of Painful Oxaluria. B. G. R. Williams, Paris, Ill.
103 Present Status of Tuberculin Tests. C. B. Slade, New York.

Military Surgeon, Chicago

May, XXXII, No. 5, pp. 427-526

104 Bloodiest Day in American History—Antietam. L. C. Duncan, U. S. Army.
105 Cooperation of Public Health Service with Navy in Time of War. T. W. Richards, U. S. Navy.
106 Traumatic Rupture of Intestines; Operation; Recovery. D. P. Card, U. S. Army.

New Jersey Medical Society Journal, Orange

June, X, No. 1, pp. 1-54

107 Preventive and Unnecessary Surgery, Based on Investigation of Earliest Symptoms of Surgical Diseases and Comparatively Inferior, Immediate and Permanent Results of Intervention in Later Stages. J. C. Bloodgood, Baltimore.
108 Infant Mortality. T. N. Gray, East Orange.
109 Renal Tuberculosis; Report of Case. A. H. Lippincott, Camden.
110 Obstetrics and Gynecology in History of Our Race. E. J. Ill, Newark.

New Orleans Medical and Surgical Journal

June, LXV, No. 12, pp. 851-926

111 Importation of Foundlings—Sociologic Problem. H. D. King, New Orleans.
112 Modern Conceptions of Diabetes Mellitus. I. I. Lemann, New Orleans.
113 Duties of Medical Man as Expert and Witness and Importance of Careful Examination of Railway Accident Cases. E. D. Martin, New Orleans.
114 Value of Roentgenogram in Medicolegal Questions. E. C. Samuel, New Orleans.
115 Some Views on Erythema Multiforme. I. Dyer, New Orleans.

New York Medical Journal

June 14, XCVII, No. 24, pp. 1217-1268

116 Gonorrhea from Pathologic Standpoint. G. A. Wyeth, New York.
117 Relation of Trauma to Bone Tuberculosis. H. A. Wilson and R. C. Rosenberger, Philadelphia.
118 Diagnostic Study of Face. H. A. Knox, Ellis Island, New York.
119 Principles of Freud's Psychology. M. J. Karpas, New York.
120 Instantaneous Transformation of Mercuric Compounds to Calomel, and Application of Process in Cases of Mercuric Poisoning. G. A. Linhart, New Haven, Conn.
121 Hallucinations of Hearing and Diseases of Ear. J. H. W. Rhein, Philadelphia.
122 Erythromelalgia. A. E. Fossier, New Orleans, La.
123 Prognostic Value of Arneth Blood-Count in Pulmonary Tuberculosis. J. Kramer, New York.
124 Three Cases of Cesarean Section. A. M. Hilkowich, New York.
125 Chronic Mediastinitis following Osteomyelitis of Sternum. H. M. Armitage, Chester, Pa.

Oklahoma State Medical Association Journal, Muskogee

June, VI, No. 1, pp. 1-61

126 Intussusception: Report of Two Cases. J. H. White, Muskogee.
127 Few Medical Thoughts. C. J. Fishman, Oklahoma City.
128 Melancholia of Involution. F. B. Erwin, Wellston.
129 Skin Grafting. J. Culbertson, Whitefield.
130 Thoroughness in All We Do. G. A. Morrison, Poteau.

Wisconsin Medical Journal, Milwaukee

May, XI, No. 12, pp. 369-408

131 Apparently Non-Suppurative Nasal Sinus Disease. S. G. Higgins, Milwaukee.
132 Toxemias of Pregnancy. W. G. Darling, Milwaukee.
133 Psycho-Analysis. W. F. Becker, Milwaukee.
134 Two Cases with Tumors, Originating from Region of Hypophysis. F. Pfister, Milwaukee.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Australasian Medical Gazette, Sydney

April 12, XXXIII, No. 15, pp. 325-354

1 Exophthalmic Goiter. C. MacLaurin.
2 Endemic Goiter. W. C. Howie.

April 19, No. 16, pp. 355-386

3 Eruption of Skin Caused by Poison Ivy. E. C. Stirling.
4 Congenital Hernia of Diaphragm Through Esophageal Opening, Extrapleural and Occurring into Right Thorax. To be continued.) H. Rischbieth.

April 26, No. 17, pp. 387-412

5 Congenital Hernia of Diaphragm Through Esophageal Opening, Extrapleural and Occurring into Right Thorax (Concluded.) H. Rischbieth.
6 Case of Tick-Bite Followed by Wide-Spread Transitory Muscular Paralysis. E. M. Eaton.

Clinical Journal, London

May 21, XLII, No. 7, pp. 97-112

7 Fractured Femur. C. G. Watson.
8 Angina Pectoris. R. Saundby.
9 Autoplastic Ovarian Graft and Its Clinical Value. B. Whitehouse.
10 Diagnosis and Treatment of Skin Diseases in School Children. F. Gardiner.

May 28, No. 8, pp. 113-128

11 Common Mistakes in Treatment of Diseases of Women. F. J. McCann.
12 Disorders of Speech as Evidence of Nervous Disease. D. Forsyth.
13 Certain Pericardiac Adventitious Sounds. C. Coombs.

Dublin Journal of Medical Science

May, III, No. 497, pp. 321-396

14 Case of Tabes Dorsalis with Spinal Lesion. F. C. Purser.
15 Iodoform and Benzoyl Chlorid in Pulmonary Tuberculosis. J. B. Coleman.
16 Return Cases of Scarlatina. J. M. Day.

Indian Medical Gazette, Calcutta

May, XLVIII, No. 5, pp. 168-208

17 Serodiagnosis of Syphilis. W. D. Sutherland.
18 Life Assurance in India. A. Caddy.
19 Judicial Hanging. J. Mulvany.
20 *Can Cholelithiasis Be Treated Successfully without Operation? T. H. Delany.

20. **Treatment of Cholelithiasis.**—Delany cites four cases in which he gave ipecac (pulv. ipecacuanha, gr. 1, with pulv. ipecacuanhae et opii gr. 1, every four hours) with very satisfactory results. He varied the Dover's powder according to the needs of the case. He says the drug is vomited at first in most cases, but this can usually be arrested by combining it with some preparation of opium.

Journal of Pathology and Bacteriology, Cambridge

April, XVII, No. 4, pp. 432-630

21 *Certain Changes in Voluntary Muscles in General Diseases. R. C. Jewesbury and W. W. C. Topley.
22 *Method for Plate Culture of Anaerobic Bacteria. J. W. M'Leod.
23 *Action of Diuretics in Experimental Nephritis. A. E. Boycott and J. H. Ryffel.
24 *Irritation Giant Cells in Dermoid and Epidermoid Cysts. M. J. Stewart.
25 *Changes Observed During Absorption of Experimentally Produced Sarcomas. G. W. Nicholsen.
26 *Aberrant Epithelial Structures Found in Renal Cortex in Course of Eighty Consecutive Post-Mortems. J. S. Dunn.
27 Anemia Produced by Injection of Hemolysin Obtained from Streptococci; Natural and Acquired Immunity to Streptolysin. J. W. M'Leod and J. W. M'Nee.
28 *Bacteriology of Rheumatism—Further Evidence in Favor of Causal Relationship of Streptococci. J. M. Beattie and A. G. Yates.
29 Improved Method for Histologic Study of Arteries. A. H. MacCordick.
30 *Treatment of Gonorrheal Infections by Vaccines, and Regulation Thereof by Complement Fixation Test. J. E. R. M'Donagh and B. G. Klein.
31 Culture in Vitro of Some Tissues of Adult Frog. G. H. Drew.
32 Pathology of Ceco-Colic Sphincteric Tract of Colon. D. P. D. Wilkie.
33 Action of Tuberculin and Selenlol on Mouse Cancer. C. L. Williams.
34 Nitrogen Content of Malignant Tumors in Man. R. A. Chisolm.
35 Method of Analysis of Brain Lipoids. J. L. Smith and W. Mair.
36 "Lipoids" Which Resemble Lecithin in Forming Hemolysins Along with Cobra Venom. J. Cruickshank.

21. **Changes in Voluntary Muscles.**—The authors state that in wasting diseases the voluntary muscles show varying degrees of histologic change bearing little relation to the actual degree of wasting present. These changes consist of alterations in the size, shape and staining reactions of the fibers, increase in the fiber nuclei, and alteration in their arrangement, sometimes resulting in the production of false giant cells. In many cases there is also a relative increase of the interstitial tissue. In acute general diseases muscle changes are extremely slight, consisting of some degree of hyalin and granular change, and in a certain small number of cases of fatty degeneration. In certain disorders associated with an abnormal carbohydrate metabolism there is a great increase in the amount of interstitial fat present. In many cases small collections of fat droplets are present in the neighborhood of the fiber nuclei; these are common in advanced life, rare in children, and almost entirely absent in animals. They bear no relation to true fatty degeneration, and it is doubtful whether they have any pathologic significance. True fatty degeneration appears to be much less common than is usually stated, but it occurs to a marked degree in cases of diphtheritic toxemia, in certain blood disorders, and in poisoning by phosphorus. Of the many muscles stained for glycogen, it was only strikingly present in each of the three cases of diabetes examined. Amyloid change was not found in any case examined.

22. **Plate Culture of Anaerobic Bacteria.**—The apparatus described by McLeod consists of two parts, a porcelain dish to contain the pyrogallic acid and caustic soda solutions and a special Petri capsule which has its free margin turned inward and upward. The porcelain dish is a hollow chamber. It is bisected in the lower two-thirds of its depth by a vertical partition and there is a circular aperture in the center of its upper surface. Around the margin of the upper surface is a shallow groove which is filled with plasticine. In using the apparatus, 5 c.c. to 7 c.c. of a 15 per cent. solution of pyrogallic acid is run into the compartment of the chamber A; this can most easily be done with a large pipet. Five c.c. to 7 c.c. of a 10 per cent. solution of caustic potash is introduced into the other compartment B. The Petri dish is then pressed down into the "plasticine" in the groove, and the "plasticine" is pushed up against its outer margin to ensure the proper sealing of the chamber. As soon as the access of fresh oxygen from without has been thus cut off, a mixture of the pyrogallic acid and caustic potash solutions is effected by tilting the porcelain dish so that the solutions run over the partition and react with one another. Any condensation water which may form is retained in the groove.

23. **Diuretics in Experimental Nephritis.**—When the convoluted tubules had been put out of action by uranium nitrate the authors found, contrary to expectation, that caffein excited the secretion of urine, and equally with Ringer's fluid

or 5 per cent. salt solution was an effective diuretic. In any case in which a "secretory" diuretic has failed, "mechanical" diuretics have also failed, and where the one sort has been effective the other sort has acted equally. The response of the normal kidney to caffein is slower than to the other diuretics used. The response of the nephritic kidney to all three diuretics is slower than that of the normal kidney, and the response to caffein remains slower than to Ringer or salt solution. The urine produced by the kidney in the early stages of uranium nephritis is smaller in amount and contains less chlorid than normal. Caffein urine in normal animals contains less chlorid than that produced by the injection of Ringer or salt solution; in nephritic animals all three urines contain less chlorid than normal, and caffein urine still contains less than the other two. In the course of the response to any one diuretic the concentration of chlorid in the normal urine increases as the rate of secretion decreases; in the nephritic urine there may be a very slight increase in concentration, or the concentration may fall as the rate of secretion becomes less. Uranium causes glycosuria; the method of experiment also causes glycosuria in normal rabbits. This has to be taken into account in considering the variations in the concentration of chlorid.

24. **Giant Cells in Dermoid Cysts.**—In the great majority of ovarian dermoids Stewart found that teratomatous structures are confined to the embryonal rudiment or its immediate neighborhood, while the remainder of the cyst is lined by a layer of granulation tissue containing many giant cells. The giant cells are of the irritation or foreign body type, and both they and the granulation tissue generally appear in response to irritation of the unprotected fibrous-tissue wall of the cyst by the contained epidermis debris or its disintegration products. The process is analogous to that which follows the experimental injection subcutaneously of cholesterin, fatty acids, etc. That hairs are unnecessary for the formation of this cellular layer is shown by the appearance of the latter in an epidermic cyst where hairs were nonexistent. That cornified epithelium alone may stimulate the formation of similar giant cells is shown by their occurrence with highly keratinous epitheliomas.

25. **Absorption of Experimental Sarcomas.**—A summary of Nicholson's investigation of the changes observed in the regression of sarcomas gives the following results: The sarcoma cells either become differentiated into fibrous tissue or they degenerate and disappear. Necroses do not occur in excess of those found in growing tumors. The surrounding tissues react and produce granulation tissue, which invades the sarcoma and destroys it, partly by means of phagocytes but mainly by some other means, mechanical or chemical, the precise nature of which cannot be recognized with the microscope. The hemorrhages which occur around the growths do not differ from those in healthy tumors. They do not (in sarcomas at any rate) act as a causative agent, but are to be regarded as indications of the acuteness of the reaction.

26. **Aberrant Epithelial Structures in Kidney.**—Epithelial abnormalities, namely, suprarenal rests, adenopapillary tissue, and papilliferous cysts, were found by Dunn fairly frequently in the kidneys of a series of eighty consecutive cases. He points out that any of these aberrant epithelial structures might conceivably give rise to malignant tumor formation, but of the three the papilliferous cysts, from their peculiar histologic features, suggest themselves as the most probable origin of tumors of the Grawitz type.

28. **Bacteriology of Rheumatism.**—Beattie and Yates endeavored to cultivate streptococci, which they believe to have a causal relationship, from the synovial membranes of the knee-joints, from the tonsillar region, from the blood and from other tissues, in 129 cases, with eighty-one negative and forty-one positive results. Of the cases with rheumatic history, nineteen out of thirty-one, or 61 per cent., produced arthritis, one produced septicemia and eleven had no obvious results. Of eight joints with definite history or signs of rheumatism from which they were able to isolate a streptococcus, in only one was there a clear failure of this organism to produce arthritis in rabbits. This organism was isolated from a case of chronic myocarditis with no recent rheumatic attacks. Of the cases with no rheumatic history two out of nine, or 22 per cent. produced arthritis and seven produced septicemia. Of the cases of tonsillitis without history, one produced arthritis and four produced septicemia. These results the authors believe illustrate the non-septicemic character of the organism which they associate with rheumatism, for in the thirty-one cases with rheumatic history there occurred only one death from septicemia; whereas in the non-rheumatic, eleven out of fourteen died from septicemia, and the three in which arthritis was produced were possibly rheumatic. In their opinion the organism gains entrance from the mouth or other part of the alimentary tract; it becomes lodged in certain situations, particularly in serous membranes, and it produces its effects by poisons which are distributed from these centers. Of eleven patients examined, in whom there was active rheumatism at the time of examination in eight no organisms were found in the blood, and in the other three a streptococcus was isolated which produced typical arthritis in rabbits. The twelfth case was one of malignant endocarditis with no rheumatic history, and from this a pneumococcus was isolated.

30. **Vaccines in Gonorrheal Infections.**—The complement fixation test in gonorrheal infections the authors regard as a valuable aid to diagnosis. It can be used for regulating vaccine treatment. If the disease is in the latent stage and the body has need to form antibodies, the result of an injection of potent vaccine will be to stimulate their production. If antibodies are already present, the injection of vaccine in sufficient amount will temporarily neutralize or inhibit the same. The antibodies in such cases serve, apparently, to maintain the health of the body as a whole, without being adequate to destroy completely the foci of infection. The new formation of antibodies, following on their temporary disappearance, probably differs in some way which is not yet explained. The injection of a potent vaccine promotes a new artificial kind of immunity more effectual than that already established in the infected individual. Of the three methods of vaccine treatment tried, the intravenous autolyzed solution comes midway in its therapeutic action between an ordinary vaccine and a sensitized vaccine—both the latter given subcutaneously or intramuscularly. The vaccine sensitized with a human antigonococcus serum is far superior to the vaccine sensitized with immune horse serum. Vaccine treatment, provided it is only supplementary to the right local and general treatment, is in many cases necessary before a cure can be obtained.

Journal of Tropical Medicine and Hygiene, London

May 15, XVI, No. 10, pp. 145-160

37 Clinical Study of Malaria in Panama. J. P. Bates.

Medical Press and Circular, London

39 Intratracheal Insufflation of Ether. H. de L. Crawford.

May 21, XCV, No. 3863, pp. 537-564

38 Some Urethral Injuries and Treatment of Urethral Stricture. (To be continued.) R. Morison.
40 Alimentary Toxemia in Dermatology. W. K. Sibley.
41 Bene Diagnoscit, Bene Curat. H. Macnaughton-Jones.

May 28, No. 3864, pp. 565-592

42 Some Urethral Injuries and Treatment of Urethral Stricture. R. Morison.
43 Argument for Large State Insane Hospital. T. Clouston.
44 New Spirochete of Human Blood and Its Bearing on Pathology. H. D. McCulloch.
45 Necessity for Medical Examination of All Workers. J. C. McWalter.

Practitioner, London

June, XC, No. 6, pp. 909-1036

46 *Treatment of Bronchial Asthma. A. Latham.
47 *Nasal Disease in Relation to Asthma. D. Grant.
48 *Asthma in Children. E. B. Smith.
49 Pellagra. C. R. Box.
50 Pathology and Treatment of Uterine Hemorrhage. B. Whitehouse.
51 Retroflexion of Uterus. A. Donald and W. F. Shaw.
52 Headaches of Organic Origin. G. Holmes.
53 Headache and Its Treatment. G. De Swietochowski

54 Treatment of Neuralgia and Facial Spasm by Nerve-Injections. H. Campbell.
55 Perforating Ulcers of Stomach and Duodenum. J. Morley.
56 Direct Combined Examination of Single Radiograph and Patient: Episcope. W. Cotton.

46. **Treatment of Bronchial Asthma.**—Light cauterization of the nerve of the septum in suitable cases, adequately carried out, Latham says, produces great relief in a large proportion of cases. He has seen a number of patients in whom this procedure has been carried out by capable men. In few instances does it cure, for its effects are seldom permanent. In a large number it gives great relief, and in a considerable proportion of cases this relief may last for several years. Such cauterization, he says, can only act by virtue of diminishing the capacity of dust or odors for stimulating unduly sensitive nasal nerve endings, and so inducing a reflex effect on the bronchial tubes. Latham always makes minute enquiries as to the possibility of dust being a contributing factor in any case of asthma. Such questions as the use of woolen garments which, on being drawn over the head, give rise to a shower of small particles, or the use of feather boas, eider-down quilts, or feather beds must always be investigated. Again, blankets will give rise to much dust, which can be avoided by suitable coverings. He enquires as to the surroundings of the patient's house, and the presence of animals or flowers in the house. He makes a point of carefully examining the nose. He endeavors to ascertain whether the excitability of the nervous system is being increased by errors of diet, or the condition of the bowels or other organ.

47. **Nasal Disease in Relation to Asthma.**—When nasal disease is present, even allowing for the rare occasional increase of temporary discomfort, Grant says, the coincidence of asthma is an additional indication for operation. Many of the disappointments are due to the obstinate nature of the nasal disease.

48. **Asthma in Children.**—If the attacks occur only at night, Smith gives a regular mixture of potassium iodid, belladonna and ethereal tincture of lobelia, to be given at bedtime. It is safe to give ½ grain of iodid for each year of life, 2 to 10 minims of tincture of belladonna from infancy to 10 years old, and lobelia in minim doses for every year of life up to 5 minims. If the attacks occur by day and night, he has no hesitation in giving the same prescription in rather smaller doses, three times a day. He thinks iodids will be found the sheet anchor in this disease in early life; when they fail, it is rare to get relief with other drugs. He sounds a note of warning. Iodids should be given regularly for a few weeks, six to eight, and then left off for a fortnight and replaced by a tonic, such as arsenic, in the interval, then the course of iodids can be renewed. In this way, it will be found that the iodid will retain its effect much longer. Smith has used the liquid extract of grindelia recently, and thinks, perhaps, there is a little improvement where other drugs failed. Calcium, he is not satisfied, does much good. It may be given as the syrup of the lactophosphate, or as calcium chlorid. With the calcium, he has lately combined 4 or 5 minims of epinephrin and some parents seem to think distinct relief was gained from this mixture. In an acute attack in an infant, hot baths, as in convulsions, seem to have a sedative effect, and some folk still swear by the old-fashioned steam kettle, the steam from which may be medicated in various ways. An injection of 3 to 5 minims of epinephrin 1/1000 can be given. If the child is very bad, nascent oxygen, and, perhaps, a very small dose of morphin sulphate.

Sei-I-Kwai Medical Journal

May, XXXII, No. 5, pp. 63-93

57 Third Report of Method of Increasing Body Weight. H. Sewaki.

Archives des Maladies de l'App. Digestif, Paris

April, VII, No. 4, pp. 181-240

58 *Coma from Undiagnosed Gastric Cancer. (Coma dyspeptique et coma cancéreux.) A. Cade and Roubier.
59 *Swallowing of Air with Cholelithiasis. (Fréquence de l'aérophagie associée à la lithiase biliaire.) H. Mauban.
60 Tuberculous Stenosis of the Pylorus in Young Man. F. Dauwe.

58. **Coma from Undiagnosed Gastric Cancer.**—Cade and Roubier had their attention called to this subject by the case of a coachman of 57 who had lost his appetite and grown very thin in the last two months and had occasional pain in the stomach but no vomiting or difficulty in swallowing. Then in two weeks a syndrome developed resembling asthenic bulbar paralysis, followed in a few days by coma; autopsy revealed a cancer of the cardia. The history of coma occurring from dyspepsia is reviewed: Senator had two patients with gastric cancer die in coma resembling that of diabetes, and a few other cases are on record. The inanition is an important factor, and this should be combated. Once installed, the coma should be treated with alkalines or, possibly, prompt operative measures to overcome the retention, the cause of the inanition and absorption of toxic gastric products. Although coma from this cause is rare, yet the possibility of it is another argument in favor of surgical measures in appropriate cases.

59. **Swallowing of Air with Cholelithiasis.**—Mauban has encountered twenty-six cases within the last year in which very nervous persons suffered from severe but intermittent pain in the stomach, conditions in this respect being normal in the interim. There was a pronounced tendency to swallow air, and this intermittent aerophagia and the epigastric pains were both secondary to gall-stone trouble. In ten of the cases the aerophagia and epigastralgia had been diagnosed before the cholelithiasis had been suspected; in five cases they developed along with gall-stone colic, and in five they followed it. In the other cases the history of the onset was unknown.

Bulletin de l'Académie de Médecine, Paris

May 6, LXXVII, No. 17, pp. 351-402

61 Tissues Living Outside the Organism. (Nouvelles expériences du Dr. Alexis Carrel.) S. Pozzi.

May 13, No. 18, pp. 403-472

62 Brushing of Clothes Soiled with Sputum a Prolific Source of Tuberculosis. Chausse and M. Letulle.
63 History of Transmission of Aphthous Fever from Animal to Man. Cadiot. (A propos de la stomatite dite aphteuse.) V. Galippe.
64 *Dosage of Carbon Dioxid Snow. (Dosage en cryothérapie locale.) M. and H. Béclère.

May 20, No. 19, pp. 475-501

65 *Wholesale Vaccination against Typhoid. (Résultats de la vaccination antityphoidique par le vaccin polyvalent.) H. Vincent. (Vaccinothérapie de la fièvre typhoïde.) Chantemesse.

64. **Dosage of Carbon Dioxid Snow.**—Béclère applies a thin sheet of cork, cut out over the lesion, to protect the adjoining tissues during the application of the solid carbon dioxid. He does not use it in the form of a pencil but in the form of melting snow contained in a small silver receptacle of a shape to fit exactly over the lesion. This ensures asepsis and permits more exact dosage, graduated by the time of application measured with a stop watch. The pressure is also graduated. The three factors for correct dosage, the temperature, the duration of the application and the pressure on the skin are thus entirely under control and dosage. Béclère's instrument for the purpose consists of the silver tube for the dioxid snow, inside a double sheath of hard rubber or cork. The bottom of the snow tube is a very thin sheet of copper or silver. A spring is arranged on the top of the tube, and as the instrument is pressed on the skin an index travels along a graduated line showing exactly the amount of pressure being applied to the spring, and hence the pressure being exerted by the snow tube on the skin. The solid dioxid in the metal tube is melted by the action of ether, alcohol or acetone. The temperature is maintained at about the same point with either of these as in the solid form of the carbon dioxid. The acetone dissolves the dioxid a little quicker than alcohol. All danger of blistering is averted by treating the spot after the application of the snow as if it were a fresh burn. The preferable technic for this seems to be to paint the region frozen by the snow with a saturated alcoholic solution of picric acid.

65. **Vaccination against Typhoid.**—Vincent relates what he thinks are the first experiences in any country of wholesale vaccination of an entire community after the outbreak

of an epidemic of typhoid. A hundred cases developed in two months at Paimpol, a town of 2,800 inhabitants, and a vigorous campaign of vaccination was at once started, vaccinating all the young people and young women as the most liable to contract the disease. None of the 400 vaccinated contracted it and not another case developed as soon as the receptive part of the population had been given the third injection. Two families refused to be vaccinated and each had a case afterward; then one of the families had all the members vaccinated and had no further cases, while four more members of the family which still refused the vaccination came down with typhoid. In another town where typhoid was raging, the mayor called a mass meeting and told the citizens of the advantages of being vaccinated and nearly every one present asked for it. Excluding the sick, the aged and those who had already had typhoid, nearly the entire population was vaccinated and the epidemic died out at once. When persons already in the clutches of typhoid were vaccinated, the disease ran an exceptionally mild course. The number thus vaccinated in the two towns was 712 out of a total civilian population of 3,500.

Lyon Médical, Lyons

May 11, XLV, No. 19, pp. 1005-1060

66 Adiposis Dolorosa in Connection with Sciatica. (Sur une variété d'adipose douloureuse.) M. Favre and A. Tournade.
67 Moving Pictures of the Mechanism Involved in Moving the Hand. (La radio-cinématographie des mouvements de pronation et de supination de la main.) M. Jaboulay.

Revue Médicale de la Suisse Romande, Geneva

May, XXXIII, No. 5, pp. 357-436

68 *Banti's Disease in Children. A. D'Espine.
69 From the Seat of War. (Notes de chirurgie de guerre. Campagne de 1912-13.) A. C. Matthey.
70 Excellent Results from Ovarian Treatment in Pulmonary Tuberculosis. Jaquerod.

68. **Banti's Disease in Children.**—D'Espine reports two cases in infants nearly 2 years old with the autopsy findings, and tabulates the details of sixteen other cases in children he has compiled from the literature. Three were under ten and thirteen between 10 and 17. The first symptoms had been observed from a few months to nine years before. Wolff has also reported a case in a rachitic infant. This brings to nineteen the number of cases of this disease known in children. In eight cases the symptoms were merely enlargement of the spleen and anemia—the first stage; in seven cases there were in addition hemorrhages, especially in the stomach and intestines, urobilinuria and slight jaundice and ascites. In four cases the disease had progressed to confirmed cirrhosis. In five cases the first symptoms were noticed at the age of 5. Splenectomy was done in eight cases with recovery of all but one of the children; this group includes three children in the advanced stage of the disease. In one of the older children the splenectomy was supplemented by omentopexy and the patient recovered although there was considerable atrophy of the liver. In two cases the patients recovered spontaneously. One was a youth of 17, so debilitated that the contemplated splenectomy was abandoned; he was tapped fifteen times in four months and 64 liters withdrawn. Then he began to improve and seemed to be in good health with full earning capacity restored when reexamined fifteen months later. The only trace of his former trouble is that the spleen is still large and hard. In the other case of spontaneous recovery the disease gradually developed at the age of 5 and during ten years the girl required tapping on a few occasions. The spleen was large, hard and smooth, but the liver was apparently normal and there was no jaundice. At 7 the child had hematemesis and melena and again after pneumopia at 12, after which the health seemed to be permanently good until 15, when there was another gastrointestinal hemorrhage without apparent cause, and then the spleen subsided gradually to normal size. At 17 the girl was in perfect health and has so continued to her present age of 25. It seems probable that the beginning of Banti's disease in adults dates from early childhood in many cases. There seems to be an unmistakable connection between splenomegaly and rachitis; many cases of rachitic splenomegaly, assumed to be of syphilitic origin, were probably in reality incomplete forms of Banti's disease. Inoculation of spleen tissue into animals in D'Espine's cases gave negative results, confirming the assumption that the disease is not of infectious origin. Banti has recently called attention to the similarity if not identity between the cases of hyperplasia and diffuse fibrosis of the spleen of non-parasitic origin and the cases of true Banti's disease. Sasuchin always found the degree of enlargement of the spleen proportional to the severity of the rachitic lesions. D'Espine remarks in conclusion that the only pathognomonic sign of Banti's disease is the cure of the anemia and cachexia by removal of the spleen.

Semaine Médicale, Paris

June 4, XXXIII, No. 23, pp. 265-276

71 *Tuberculous Processes Elsewhere than in Lungs and Bones. (Du traitement des ganglions tuberculeux et des affections tuberculeuses des gaines tendineuses, des muscles et du tissu souscutané.) F. de Quervain.

71. **Surgical Tuberculosis Elsewhere than in Bones and Joints.**—De Quervain remarks that secondary infection is much less to be feared in tuberculous affections of the lymph-nodes, tendon sheaths, muscle or subcutaneous tissue than in case of bone and joint tuberculosis. Operative treatment also has a much less injurious influence on functioning later, but at the same time radiotherapy or heliotherapy is generally sufficient. Tuberculous lymph-nodes can be cured by puncture or a very small incision unless some compact isolated lesion invites excision. Sanatorium treatment with exposure to the direct sunlight is not available for all, and roentgenotherapy is a fair substitute. He has found ample for the purpose a course of four or six exposures, one every three or four weeks, each dose a whole or half Sabouraud dose, filtering the rays through an aluminum screen 1 mm. thick. Climatic treatment and heliotherapy can be reserved for the cases in which roentgenotherapy fails or multiple foci require more general treatment. Six months or a year are generally necessary for a cure under these conditions. With a tuberculous process in a tendon sheath, radiotherapy is superior to operative measures as the latter are liable to impair functioning later. He had a striking instance of this recently, the flexor tendons of each hand being the seat of a tuberculous process; one side was treated with the knife, the other with radiotherapy but the functional outcome was decidedly better on the side of the latter. He warns that the ankle seems to be peculiarly susceptible to the Roentgen rays, and consequently great caution is necessary not to go above a total dosage of three or four Sabouraud doses. He excises the lesion without hesitation if it is in a muscle at a point where it will not entail functional disturbance. But if the sternocleidomastoid muscle is involved he is very careful to refrain from any measure which would affect its functioning. Iodoform injections are preferable here, and radiotherapy if the lesion is not too far below the surface. Below 4 cm. it is useless to hope for much influence from the rays. With lesions in the subcutaneous tissue, radiotherapy can generally be relied on; if this fails multiple incisions, curetting, balsam of Peru, phenol and camphor or silver nitrate will accomplish the cure.

Archiv für Gynaekologie, Berlin

XCIX, No. 3, pp. 455-656. Last indexed May 31, p. 1747

72 Hypophysis Extracts in Obstetrics. (Pituitrinanwendung in der Geburtshilfe.) A. Foges.
73 *Arteriosclerosis of the Uterus and its Connection with Uterine Hemorrhage. (Die Gebärmutterarteriosklerose.) F. W. Bukojemsky.
74 Morphology of Uterine Carcinoma. J. Obata.
75 Intraperitoneal Myoma of Round Ligament; Two Cases. E. Weishaupt.
76 *Ruptured Graafian Follicle as Point of Lessened Resistance. (Die klinische Bedeutung der Follikelsprungstellen im Ovarium.) F. Cohn.
77 Hyperemia and Hemorrhage in Female Genital Organs after Injection of Ovarian or Placental Extract. B. Aschner.
79 *Uncontrollable Vomiting of Pregnancy and the Pathologic Findings at Autopsy. (Die Beziehungen der Hyperemesis gravidarum zur akuten gelben Leberatrophie und sonstigen Sektionsbefunden.) P. Heinrichsdorff.

80 Galvanization plus Hypophysis Extract as Aid in Delivery. (Ueber die künstliche Einleitung der vorzeitigen und rechtzeitigen Geburt durch Galvanisation in Verbindung mit Pituitrin.) E. Vogelsberger.
81 Treatment of Extra-Uterine Pregnancy. E. Falk.

73. **Arteriosclerosis of the Uterus.**—Bukojemsky reports three cases of uncontrollable hemorrhage from the uterus compelling the removal of the organ. The women were between 40 and 52 and the uterus showed typical sclerosis of the walls and vessels, with necrosis in the vessel walls in one of the cases.

76. **Clinical Importance of Rupture of Graafian Follicles.**—Cohn concludes from his analysis of six cases that the ruptured follicle is a source of danger not only because it opens the contents of the follicle into the abdominal cavity but because it represents a weak point after it has healed. These weak points are liable to give way at any time and open a new communication between the corpus luteum and the abdominal cavity. The burst follicle is liable to bleed profusely, or there may be slight hemorrhage without symptoms but entailing adhesions later. The gaping follicle also invites infection; when infection occurs it is commonly with the gonococcus or tubercle bacilli. The burst follicle also invites the settling of cancer cells from a primary tumor elsewhere, and the ovary is thus a frequent site for cancer metastasis.

79. **Connection between Uncontrollable Vomiting of Pregnancy and Yellow Atrophy of the Liver, Etc.**—Heinrichsdorff declares that the liver affection or nephritis often found at autopsy is of too recent date, as a rule, to be the cause of the hyperemesis. When the uncontrollable vomiting occurs during the first half of the pregnancy, it may persist for weeks or months, but no organic changes can be found in any organ and the patient generally recovers at last. In the exceptional cases in which she succumbs to inanition there are no positive autopsy findings. Eclampsia or acute yellow atrophy of the liver in pregnancy may occur in the midst of health or as a sequel to uncontrollable vomiting. The uncontrollable vomiting does not seem to be the result of an intoxication, but it may pass into an intoxication. The changes in the organs found at autopsy are of recent development in comparison with the long established hyperemesis. The aggravation and change in the clinical picture as eclampsia or acute yellow atrophy of the liver develops are due to an intoxication, and are not the third stage of the vomiting trouble as is generally assumed.

Archiv für klinische Chirurgie, Berlin

CI, No. 2, pp. 291-571. Last indexed June 14, p. 1926

82 *The Later Fate of Patients after Nephrectomy. (Das spätere Schicksal der Nephrektomirten.) H. Kümmell.
83 *Fractures of the Pelvis; Eighty Cases. (Beckenbrüche.) J. Jensen.
84 Multiple Brown Tumors with Osteomalacia. Molineus.
85 *Rupture of Liver and Bile Passages. (Casuistischer und experimenteller Beitrag zur Leber- und Gallengangsruptur.) O. Orth.
86 *Treatment of Bone and Joint Tuberculosis. (Knochen- und Gelenktuberkulose.) C. Garrè.
87 *Penetrating Wounds of the Knee. R. Müller.
88 *Testicle Tumors. (Zur Kenntnis der Hodengeschwülste und die Bedeutung des Traumas für ihre Entstehung.) T. Myata.
89 *Conditions in regard to Continence after Operations for Rectal Cancer. H. Körbl.
90 *Duodenal Ulcer. H. Küttner.
91 Experimental Periosteum Transplants. (Freie Periostverpflanzung.) E. Schepelmann.
92 *Fracture of the Radius. A. Troell.
93 *Segment of Carotid Artery Substituted for Segment of Abdominal Aorta. E. Jeger and H. Joseph.
94 *Experimental Production of Gastric and Duodenal Ulcers. W. Gundermann.
95 Fracture (?) of Scaphoid Bone in Children. (Das Köhler'sche Knochenbild des Os naviculare pedis bei Kindern—keine Fractur.) A. Köhler and E. O. P. Schultze.
96 Retroperitoneal Hernia. (Die Cooper'sche Hernie.) A. P. Krymow.

82. **After Nephrectomy.**—Kümmell's communication was summarized in the Berlin Letter in THE JOURNAL, May 10, p. 1474.

83. **Fractures of the Pelvis.**—Jensen's article was summarized p. 170 of THE JOURNAL, Jan. 11, 1913.

85. **Rupture of the Liver.**—In Orth's case the young man hit the region of the liver on the edge of a stone step in a bicycle accident. The rupture was in the lower surface of the left lobe of the liver and jaundice and clay-colored stool indicated injury of the biliary apparatus but there was no special shock. The pulse was full and quiet with a beat of 54 or 58. He refused an operation until intense pain developed forty-eight hours after the accident and the upper abdominal wall became rigid. The pulse kept remarkably slow until the bile and blood—a liter in all—had been removed from the abdominal cavity, when the pulse began to increase and was soon 90. The operative mortality in cases of rupture of the liver has dropped in recent years from 85.7 to 65.54 per cent. Orth tamponed, as this was the simplest and quickest measure possible, the rupture being at a point where suture was out of the question while the tampon prevented hemorrhage later. The temperature did not go over 37.9 and the patient was discharged in two weeks and had regained full earning capacity in three more weeks.

86. **Treatment of Bone and Joint Tuberculosis.**—Garrè's article was summarized in the Berlin Letter in THE JOURNAL, April 26, p. 1312. It is accompanied by eight illustrations.

87. **Penetrating Wounds of the Knee.**—Müller reviews the experiences with thirty-three cases of injury of the knee, including sixteen from a knife, needle, nail, sickle or impalement. In the other cases the knee was crushed. Stab wound of the knee must be treated as already an open wound. The outcome depends on bacterial infection. The course of treatment in his penetrating cases averaged fifty-eight days, ranging from twelve to 193. In twelve stab wounds the joint was movable in five but in the others there was more or less impairment of function. In seventeen crushing injuries three children died, and the others required a course of treatment of from seventy-three to 295 days' duration. Amputation was done in two cases; all the other patients were left with a more or less stiff knee.

88. **Cancer of the Testicles.**—Miyata summarizes twenty-seven cases and says that there was a history of trauma in nearly 50 per cent. The patients were mostly laboring men in the prime of life; in twenty-one the tumor was some form of sarcoma; in one case a carcinoma, in three endothelioma, in one a perithelioma and in another, of a mixed type. The interval after the trauma before the tumor developed was six months, one year, four years and five years in one case each, and eighteen months in three cases. The length of the interval was not known in the others.

89. **Continence after Operations for Rectal Cancer.**—Körbl analyzes the experiences in 204 cases in von Eiselsberg's service at Vienna. The operative mortality was 13.6 per cent., being 3.8 per cent. higher in the sixty-five resection cases than after the 118 amputations. The ultimate outcome however was much better after the resections. There were only fifteen permanent cures in the 118 amputation cases while there were twenty-eight permanently cured of the sixty-five patients treated by resection. This brings to 39 per cent. the total among the 136 patients who lived for three years or more after the operation free from recurrence. Some of the patients are still in good health at an advanced age, 77, 78 or 81. He discusses in detail the outcome in regard to ultimate continence with various technics. The condition is at present satisfactory in nearly 50 per cent. of the patients who had to have an anus made in the sacral region. The results were good with the Gersuny twist in about 75 per cent. of the amputation cases in which this technic was applied, but the best results were obtained when the gut had been kinked around the sacrum. Circular suture gives superior results in respect to continence after resection, but when it cannot be done under favorable circumstances, it is best to refrain from attempting it, and merely suture the anterior circumference, fastening the rear portions of the circumference to the skin to improve conditions before the final step of the operation.

90. **Duodenal Ulcer.**—Küttner's communication was summarized in the Berlin Letter in THE JOURNAL May 3, 1913, p. 1374.

93. **Substitution of Carotid for Abdominal Aorta.**—Jeger and Joseph state that their experiences with fourteen dogs proves that it is feasible to replace a segment of a large artery with a segment of a smaller one from the same animal. One of the dogs is still alive and apparently normal.

94. **Experimental Gastric and Duodenal Ulcer.**—Gundermann succeeded in rapidly inducing ulceration in the stomach and duodenum in the rabbit and dog by means of injuring the liver, shutting off the circulation from a certain part of the liver or inducing degeneration in the liver by other means. His findings sustain the assumption that abnormal functioning of the liver is connected in some way with ulceration in the upper digestive tract.

Beiträge zur Geburtshilfe und Gynaekologie, Leipsic

XVIII, No. 2, pp. 163-306. Last indexed April 12, p. 1193

97 Artificial Abortion Considered from Standpoint of Eugenics. (Lässt sich der künstliche Abortus aus rassehygienischen Gründen motiviren?) H. Bayer.
98 Etiology of Atresia of Female Genital Organs. (Zur Aetiologie der Gynatresien.) F. Kermauner.
99 *Clinical Importance of Date of Infection of the Fetus with Syphilis. J. Trinchese.
100 *Causes of Tardy Hemorrhage after Childbirth. (Zur Aetiologie der Spätblutungen im Wochenbett.) F. A. Loofs.
101 Molluscum Contagiosum. C. Merkel.
102 Advantages of the Deventer-Müller Method of Delivery of the Shoulders. (Was leistet die D.-M.'sche Entwicklung des Schultergürtels?) A. Ziegler.
103 *Schöner's Theory for Predetermination of Sex. (Zur Frage der Vorausbestimmung des Geschlechts beim Menschen.) O. Schöner.

99. **Date of Infection of Fetus with Syphilis.**—Trinchese is convinced that the father does not directly transmit syphilis to the offspring, and that the ovum does not become infected. The infection generally occurs during the last half of the pregnancy; there is no evidence at present to indicate that infection occurs during the first half of the pregnancy although this is possible. He insists further that syphilis in itself does not induce abortion. When syphilitic women have an abortion, other causes than the woman's syphilis must be incriminated. When the fetus becomes infected with syphilis the disease runs a brief acute course as a spirochete sepsis which begins and ends in the uterus. Children born alive with syphilitic symptoms are generally infected shortly before birth and they are usually ripe or nearly so. By vigorous mercurial treatment of the mother it may be possible to save the child. The only hope, however, is when the treatment is begun before the fetus becomes infected. Consequently the mother should be given treatment at once on suspicion of syphilis as soon as the pregnancy is ascertained. It may save the life of her unborn babe even when the treatment is not begun until the pregnancy is half through. But if the fetus is already infected there is no hope of saving it. He describes a number of cases to sustain these assertions and cites various authors—all of these experiences confirming the efficacy of vigorous treatment of the woman, in time, that is, prior to the infection of the fetus. He gives one course between the sixth and eighth week till the middle of the pregnancy, then waits for two or three weeks and begins anew, and then gives a third, milder course which brings the woman to term.

100. **Tardy Hemorrhage after Childbirth.**—In Loofs' three cases the hemorrhage came on the third week or month after an apparently normal childbirth and the women succumbed. After the first profuse hemorrhage, there was a period of a few days or weeks entirely free from bleeding before another gush of blood. One patient had six of these hemorrhages, dying the third month; a false aneurysm was found in the cervical branch of the uterine artery, probably injured during delivery. Veit has reported a similar case of intermittent bleeding, the uterus having been torn during delivery. This was also the case in the third patient whose history is related, a small rupture being found after death. These patients might all have been saved if the cause for the hemorrhage had been discovered in time. Something of the kind should be suspected when a tardy profuse hemorrhage is followed by a period without any bleeding, during which the patient recuperates and feels quite well; then suddenly comes another profuse hemorrhage—a sign of aneurysm bleeding, and hence a signal for prompt operative measures. Conservative treatment has absolutely no chance for success and exposes to serious danger. Even suturing the rupture is not enough. The uterus should be removed without delay as soon as the bleeding returns and warns of the true nature of the hemorrhage. The intermission is only a treacherous truce.

103. **Predetermination of Sex.**—Some literature on this subject was listed in THE JOURNAL, Feb. 15, 1913, p. 539, and Schöner's theory was described April 20, 1912, p. 1220.

Berliner klinische Wochenschrift

May 26, I., No. 21, pp. 953-1000

104 *Surgery of the Upper Air Passages and Esophagus. T. Gluck.
105 Anemic Conditions with Chronic Gastric Achylia. K. Faber.
106 *Paralysis from Arsenic in Salvarsan and Neosalvarsan. (Ueber Arsenlähmungen.) R. Obermiller.
107 Determination of Epinephrin Content in the Blood. (Zur Adrenalinbestimmung im Blut.) L. Adler.
108 The Newspapers and Psychiatry. (Psychiatrie und Presse.) W. Vorkastner.

104. **Surgery of the Upper Air Passages and Esophagus.**—Gluck relates how the idea of prophylactic resection of the trachea occurred to him in 1877 and met with ridicule, but later he worked it out into a feasible method and it is now widely applied, suturing the trachea to the incision in the skin and thus providing for undisturbed respiration during operations on the throat and mouth above. In his 160 cases of removal of the entire larynx, he has had no mortality in the last series of 63 cases. In the 132 operated on before 1911 24 patients were free from recurrence for from four to fifteen and 21 others for three years. He has resected the pharynx in 84 cases; the mortality was 25 per cent., but there were only 2 deaths in the last 24 operations, showing progress even in this severe operation. In his 47 cases of transverse resection of the pharynx, he had only 5 deaths. In his 48 cases of hemilaryngectomy there were 3 deaths in the first 28 cases, but none in the last 20. He has done the laryngofissure operation for carcinoma in 42 cases with no mortality in the last 35, and recurrence in only 2 instances and one patient in this latter group was permanently cured by a second operation. The functional results are surprisingly good in many cases. In one of his patients, a man of 47, a new vocal cord has developed and the man can speak without effort. Many patients have a normal voice, others are a little hoarse. When the entire larynx has to be removed with the epiglottis, he provides the patient with an artificial contrivance which enables him to speak. Four bellows and a metal air reservoir are worn in a small wooden box fastened to the belt, with a rubber tube connected with a metal olive with clamp which grasps the septum of the patient's nose. A rubber tube is continued from the olive down behind the uvula. The patient works the bellows by turning a crank and makes the motions of talking and the air from the tube in the throat supplies the voice, which is distinct and without effort. He thinks that this little apparatus is destined to prove useful in case of aphonia and also after operations which render it wise to refrain from the use of the natural voice. He is now experimenting with an electric contrivance for the same purpose and states that he thinks he has succeeded in interesting Edison in the matter.

106. **Arsenic Paralysis.**—Obermiller insists that the symptoms of arsenic poisoning and those called the by-effects of salvarsan are identical, and he here presents further evidence to sustain the identity of arsenic and salvarsan paraplegias. He has been making a special study of paralysis from arsenic poisoning and compares seventy articles on the subject. All testify, he says, to the fact that with arsenic paralysis there is always degeneration in the peripheral nerves and spinal cord. The typical degeneration, the non-inflammatory changes, in the spinal cord characteristic of

arsenic poisoning, were found in Wolff-Mülzer's recent case of salvarsan poisoning. This supplies the last link in the chain of evidence for the purely arsenic-toxic nature of salvarsan paraplegias. The lack of regularity in the development of the disturbances shows that the toxic action varies with the individual and constitutional condition of the patient.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

May 23, XVI, Nos. 5-6, pp. 511-630

109 *Tubercle Bacilli in the Blood-Stream. (Vorkommen von Tuberkelbazillen im Blut.) Bacmeister.
110 *Increasing Tendency to Conservative Treatment of Bone and Joint Tuberculosis. (Moderne Bestrebungen einer konservativen Behandlung der chirurgischen Tuberkulose.) O. Rothschild.
111 *Gall-Stones and Gall-Bladder Disease in Children. (Cholelithiasis und Cholecystitis im Kindesalter und ihre Behandlung.) A. v. Khautz.
112 Relation of Mikulicz' Disease to Pseudoleukemia. W. Fromowicz.
113 *Cancer of the Prostate. H. Gebele.
114 Congenital Contraction of the Little Finger. (Angeborene familliäre Kontraktur der Gelenke des kleinen Fingers.) E. Schultze.

109. **Tubercle Bacilli in the Blood Stream.**—Bacmeister has found forty-two articles on this subject in recent literature and warns that the acid-fast bodies found in the blood on application of the Stäubli-Schnitter technic may be tubercle bacilli and again they may not. Skepticism is certainly justified by the lack of concordance between the findings in the smears and the inoculation of animals, and the great difference between the results obtained by various workers. The research in this line, however, has demonstrated that virulent tubercle bacilli may be found in the blood after the diagnostic injection of tuberculin, when they had been absent before. He has reported four cases in man and Rabinowitsch confirmed these findings by positive experimental research. These findings sustain what Virchow and Orth always maintained in regard to the artificial mobilization of the tubercle bacilli by injections of tuberculin; Robert Koch always vigorously combated this assumption.

110. **Conservative Treatment of Surgical Tuberculosis.**—Rothschild shows by his review of 170 articles on surgical tuberculosis how surgery is being driven out of this field by heliotherapy, the roentgen rays and tuberculin. The first of these is constantly winning more adherents and being applied on a wider scale. The experiences with 700 patients of this class at Rollier's sanatorium in the Swiss mountains have been so lauded by medical visitors that it is impossible to doubt any longer that the direct sunlight has a specific curative action on tuberculous tissue. The brilliant results obtained both in regard to function and lack of disfigurement are beyond anything yet realized otherwise. The method has only one drawback, namely, the extremely long period required for its application. Next in importance comes roentgenotherapy, which does not require such a long course and which can be applied anywhere. Everything seems to promise that it has a great future. At the same time it is necessary to accumulate much more experience and apply the method by uniform standards of procedure before a decisive judgment is possible. It has been much to the advantage of heliotherapy that so much material has been accumulated by Rollier under uniform conditions, thus permitting much better estimation of the results. The reports are too conflicting to date for a final judgment on the value of tuberculin treatment, but even now it can be counted on as a valuable aid, especially to supplement operative measures.

111. **Gall-Stones in Children.**—Khautz has been able to find only fifteen cases of gall-stones in children; in five between 5 and 10; in four between 13 and 17, and one new-born child; in five cases the gall-stone was an autopsy surprise. The symptoms are the same as with adults, but when there is no jaundice or swelling of the gall-bladder differentiation is difficult. In two cases the stones were passed in the stool during a purge; operative treatment was given to six of the children, the gall-bladder being removed in five; all recovered. Pure cholecystitis without stones is still rarer. One boy of 9 had colon bacilli in the turbid bile with acute cholecystitis; he was operated on the fortieth hour. A girl of 13 had sterile bile in the gall-bladder, which was not much enlarged; there was evidently cholangitis with slight cholecystitis. One boy of 5 had 250 c.c. of sterile bile in the inflamed gall-bladder, but no stones, in the course of scarlet fever. A boy of 13 was treated for acute empyema of the gall-bladder three weeks after operation for appendicitis. In another case an abscess around the gall-bladder occurred in a boy of 10 with typhoid fever; meningitis developed the tenth day of the typhoid and the boy died with signs of pneumonia. Two perforations were found in the gall-bladder, but no stones.

113. **Cancer of the Prostate.**—Gebele concludes from his study of 134 articles that there is no hope for an early clinical diagnosis of cancer of the prostate; every hard, large prostate is liable to be cancerous. There are a few cases of recovery after removal of the growth and these justify some hope from operative treatment, especially when the prostate is removed by a suprapubic operation and it is only partially involved, the cancer more in the center, the prostate smooth, not hard throughout, and the rectal muscles movable.

Deutsches Archiv für klinische Medizin, Leipsic

CX, Nos. 5-6, pp. 413-607. Last indexed May 31, p. 1749

115 Hemolytic Anemia from Fragility of Red Corpuscles and Other Causes. (Zur Klinik hämolytischer Anämien mit herabgesetzter osmotischer Erythrocytenresistenz.) F. Gaisböck.
116 Influence of Large Doses of Calcium on the Calcium Balance. (Zur Lehre des Kalkstoffwechsels. II.) N. Voorhoeve.
117 Mechanism of Development of Peptic Ulcers. (Zur Frage über das Zustandekommen des peptischen Magen- und Duodenalgeschwürs.) G. B. Gruber.
118 How High is the Dextrose:Nitrogen Quotient in Severest Diabetes? N. B. Foster (New York).
119 Dropped Beats. (Klinische Untersuchungen über das Aussetzen des Pulses bei tiefer Atmung—P. inspiratione intermittens—und bei forcierter Muskelaktion.) F. Gaisböck.
120 The Pigments of the Blood-Serum. (Die Farbstoffe des Blutserums.) A. A. H. v. d. Bergh and J. Snapper.
121 *Action of Opium on Human Gastro-Intestinal Tract. (Wirkung des Opiums auf den menschlichen Magen-Darmkanal.) A. Mahlo.
122 The Metabolism in Lymphatic Leukemia during Radiotherapy. (Untersuchungen über den Stoffwechsel bei der lymphatischen Leukämie während der Röntgenbestrahlung.) G. Cavina.

121. **Effect of Opium on the Human Intestinal Tract.**—Mahlo determined by means of x-ray pictures the effect of opium on the intestinal tract. Its greatest influence was on the large intestine, retarding the functioning so that the food remained in the intestine from twenty-four to thirty-three hours. The effect on the small intestine was also considerable, its action being delayed from five to eight hours. The action on the stomach was more inconstant. The motility was not markedly decreased except in one case. The peristaltic motion was first stimulated and then depressed. The sphincter of the pylorus was contracted and the muscle tone so depressed that dilatation, particularly of the fundus, took place. Opium seemed to have a more intense effect on the intestine when it was used in conjunction with castor oil.

Deutsche medizinische Wochenschrift, Berlin

May 22, XXXIX, No. 21, pp. 977-1024

123 *Vaccination against Diphtheria. (Dritte Mitteilung über v. Behrings neues Diphtherieschutzmittel.) W. Zangemeister. (Anhang.) E. v. Behring.
124 Bacteriology of Intestinal Disease in Infants. (Bakteriologische Untersuchungen bei darmkranken Säuglingen.) E. Gildemeister and K. Baerthlein.
125 Histologic Research on Central Nervous System of Syphilized Rabbits. G. Steiner.
126 *Severe Chronic Colitis. T. Rosenheim.
127 Cholesterin Content of Bile during Pregnancy. (Zur Frage des Cholestearingehalts der Galle während der Schwangerschaft.) J. W. McNee and L. Aschoff.
128 *Traumatic Thrombosis in the Axillary and Subclavian Veins. H. L. Baum.
129 Connection between Tabes and Psychic Derangement. (Behandlung der Tabes, speciell ihrer rudimentären Form, und deren Beziehungen zu psychopathischen Störungen.) Noehte.
130 *Advertising of Medicinal Articles. (Beschränkung der medizinischen Fachpresse in der Veröffentlichung von Heilmittelinseraten.) J. Schwalbe.

123. **Vaccination against Diphtheria.**—This is the third of the reports on which von Behring based his communication in regard to his method for durable immunization against diphtheria. Behring supplements it with a discussion of the dosage. He insists that the susceptibility to a drug or therapeutic serum is not a haphazard matter of individual response but is subject to laws, almost mathematical in their precision. We know that guinea-pigs of a certain weight respond in a certain way to a given dose of diphtheria toxin, and that if the bulk of the animal is increased by a tumor or the animal is gravid, it becomes less susceptible to the toxin proportionally to this increased weight. He is confident that there is for man and the domestic animals a similar normal standard of susceptibility which we may yet discover and thus be able to apply the exact dosage needed.

Zangemeister reports tests on parturients and new-born babes which apparently demonstrate that treatment of pregnant women may confer immunity on the child, and further that new-born babes bear the treatment without harm. They require to induce a reaction several times the dose needed for an adult who has never had diphtheria; adults who have had diphtheria react to a smaller dose. (See Berlin Letter, June 14, p. 1896.)

126. **Severe Chronic Colitis.**—Rosenheim has made a special study of fifteen cases of extremely severe protracted colitis not connected with tuberculosis or dysentery; three of the patients died. He has never had really gratifying results from operative treatment except in one instance. These patients were all of the delicate, nervous type; the nervous system evidently has a great influence on the course of the affection, so that he regards general measures that improve the blood and tone up the nervous system as the most important factors in treatment, supplemented by measures to relieve pain and permit the patients to sleep. The trouble is merely a simple catarrhal-inflammatory process in the colon, but there seems to be some special weakness of the colon walls which predisposes to auto-infection and auto-intoxication in abnormal degree. Repose of body and mind is generally indispensable, kept up for weeks. If the stomach and small intestines are sound, the diet should be bland, mostly vegetable. But if the stomach and small intestine are diseased, the diet must be arranged to ensure that the chyme is properly prepared above for the colon. In one case with much fever, benefit was realized from a vigorous course of calomel, but only in this one case; still it might be tried when secondary infection seems evident. He never saw any improvement from rectal insufflation of a powder; better results followed medicated enemas of starch, gelatin or acacia. The chief lesson taught by his experience is that in an anemic or nervous person any even mild catarrhal intestinal affection should be given thorough and persevering treatment with special care until it is entirely cured.

In three of his cases here reported in full internal measures had failed and the general health and local conditions were growing constantly worse. The patients were two women of 25 and 40 and a man of 24. In the latter case there was complicating multiple neuritis and functional derangement of the small intestine, occasional fever and extreme emaciation. Appendicostomy was then done to permit local treatment, and gradual improvement followed, all traces of the neuritis disappearing by the end of six months. The appendicostomy evidently saved the young man's life but he is still far from well. The other patients were given local treatment through a fistula into the cecum and gradual improvement followed but not enough to permit closing up the fistula. In two other cases the operation came too late to save the patients, a man of 39 and a woman of 27, and a third man of 34 died from sepsis before an operation was undertaken.

In one case the colon was found entirely normal a year after recovery under medical measures alone; the very severe colitis had recurred a few times in the course of three years. The young man succumbed finally to diffuse peritonitis which Rosenheim ascribes to some small focus of infection left from the old colitis, possibly in a diverticulum. In another case with signs of severe colitis for several months, complete recovery followed and the patient has been in good health for two and a half years. Complete subsidence of all symptoms was also realized in the case of a boy of 8 who had long had obstinate fever from his severe colitis.

128. **Traumatic Thrombosis.**—Embolism has been known to follow traumatic thrombosis in only one case to date, but the thrombosis is liable to cause persisting disturbance in the local circulation and interfere with the earning capacity when in the arm. The thrombosis is liable to be malinterpreted and the symptoms be ascribed to neuritis or an inflammatory process in the muscle. The trauma is generally sudden but indirect, so that there is nothing to draw the attention to the injured vein, especially as the accident in the seven cases on record was a trivial one, such as throwing a ball or holding in an unruly horse. Baum adds another case to the list, a woman of 54 who had to carry a heavy valise as she changed cars several times on a journey. Her right arm, shoulder and breast became painful and swollen but improved under rest and rubbing. Whenever she started to use the arm again the severe symptoms returned, and the arm was weak, the skin slightly cyanotic and marbled. Now, a year and a half later, during which time the arm has been spared and lightly massaged, it is only slightly swollen and there is no pain but only a tendency to paresthesias and a sensation of fatigue and heaviness in the arm after exertion. At the same time conditions have improved so that the woman is able to write letters. The ultimate outcome usually depends on the development of a collateral venous circulation, and treatment should aim to promote this by rest and cautious massage after the fourth week.

130. **The Advertising of Medicinal Articles.**—In Germany the police regulations allow certain drugs, like aconite and cocain, to be dispensed only on a prescription, and they are not permitted to be advertised to the public. Recently some unknown person officially denounced to the authorities certain leading medical journals for carrying advertisements of drugs the public advertising of which is forbidden. A number of the journals were summoned before the courts and in one case the editor was put on trial, but acquitted. In the other case the written explanation sent in by the editor seems to have satisfied the authorities, as no further steps have been taken. A legal opinion on the matter is given here showing the absurdity of regarding advertisements in the medical press as ordinary publicity. It states that physicians combat the advertising of drugs to the public, and hence the medical journals do not want to be read by the public. On the contrary, they strive to keep within an exclusive circle of readers. The fact that a medical journal is occasionally read by outsiders does not affect the case. The law cannot take cognizance of remote eventualities.

Medizinische Klinik, Berlin

May 18, IX, No. 20, pp. 777-816

131 *Dietetic Treatment of Gout. (Diätbehandlung der Gicht.) O. Minkowski.
132 *Effect of Mountain Climate on Man. (Wirkung des Höhenklimas auf den Menschen.) O. Cohnheim.
133 *Importance of Examination of the Blood in Lead Poisoning. (Wert der Blutuntersuchung bei Bleivergiftung.) J. Schoenfeld.
134 Influence of Tuberculous Taint on Development of Children. (Einfluss der verschiedenen Grade der erblich-tuberkulösen Belastung auf die allgemeine Körperbeschaffenheit der Volksschulkinder.) Peters.
135 *Flour and Potato Courses in Diabetic Diet. (Ueber Mehlkuren und Kartoffelkuren bei Diabetes.) W. Wolff.
136 Behavior of the Blood at Moderate Altitudes. (Verhalten des Blutdruckes im Mittelgebirge.) Siebelt.
137 Phenomena of Mutation of Bacteria. E. Toeniessen.

131. **Dietetic Treatment of Gout.**—Minkowski warns that recent research has demonstrated that uric acid can be found in the blood in normal conditions, even on a diet free from purins. The mere discovery of uric acid in the blood on a purin-free diet does not necessarily mean gout. The proportion is much larger in those inclined to gout. This accumulation of uric acid is not due to simple exaggeration of the

production of uric acid; when this occurs there is always a larger uric acid output in the urine. In gout the urine does not contain an abnormal proportion of uric acid and it seems as if the endogenous production of uric acid was rather below normal than above. The trouble seems to be retention, and the question is why the abnormally large proportion of uric acid in the blood is not passed out through the kidneys. The kidneys seem to become impermeable for uric acid alone: gout is not uremia. The assumption seems inevitable that either the uric acid itself has become modified in its physical or chemical properties, or else certain metabolic processes which govern the fate of the uric acid have become modified—the trouble does not seem to be in the kidneys themselves. Treatment should therefore aim to reduce all the mtabolic processes in general to a lower plane, and thus in this way act attenuatingly on the metabolic process assumed to be responsible for the gout. This should be supplemented by excluding from the diet the purin bodies which have been recognized as the source of gout. (His remarks on the diet in gout were summarized in the Berlin Letter in THE JOURNAL May 31, p. 1720.—His statement that a liter of beer contains as much purin bodies as 100 gm. of meat refers to Bavarian beer.) He says that the purins in coffee, tea and cocoa are in a methyl compound which does not become transformed into üric acid. These beverages may at most increase transiently the uric acid content of the urine by their diuretic action, thus sweeping out a certain amount of the previously retained uric acid. There is no reason for prohibiting these beverages in gout solely from the standpoint of uric acid. Boiled meat contains less purin bodies than roast, but fish does not differ materially from meat in general in this respect. Small fish contain more purins than beef and pork. In conclusion he calls attention to the fact that proteins form what may be called an acid diet, that is, anions (sulphuric acid and phosphoric acid) are generated among the resulting products, while vegetables constitute more an alkaline, a kation, diet, and these facts are not without influence in the management of gout.

132. See Berlin Letter, May 17, 1913, p. 1554.

133. **Examination of the Blood in Diagnosis and Control of Lead Poisoning.**—Schoenfeld has been making a special study of this subject, examining 556 persons with actual or suspected lead poisoning. He found no signs of the line on the gums in forty-four of 126 with unmistakable lead poisoning, and it was distinct in only forty-eight. It was never found in persons without teeth. The hemoglobin averaged 62 per cent. in women and 86 per cent. in men, but the most characteristic finding was the basophil granulation in the red corpuscles and the change in tint of these basophil substances under the action of certain stains. The basophil granulation and metachromasia may occur in other conditions, but in none in which there can be any confusion with lead poisoning. The workmen most exposed to the danger of lead poisoning—according to his experience—were (1) those in the powder rooms of lithographing works, (2) type founders, (3) dyers, (4) painters, (5) plating works, (6) file grinders, stereotypers, etc., and, eighth on the list, typesetters. Typesetters know the dangers to which they are exposed and apply to a physician at once at the first sign of trouble. Examination of the blood is peculiarly useful in these cases as when it shows normal conditions the "lead hysteria" patient can be reassured that his symptoms are not due to lead poisoning. The blood findings are also useful to control the progress toward recovery; in eighteen of forty patients thus kept under supervision the blood returned to normal after the patients had changed to some other occupation. The blood findings show whether patients are under the influence of plumbism or not, and permit appropriate treatment without loss of an hour while with negative findings the patient can be reassured.

135. **Diet in Diabetes.**—Wolff regards the oatmeal diet as a great advance in the dietetic management of diabetes as time has revealed that the benefit is not from the oatmeal especially but that practically any gruel has the same effect. He gives the details of five cases, in some of which he found a potato gruel very beneficial. By the use of various gruels, *Mehlsuppen*, it is possible to vary the diet palatably, especially when inulin is added or interposed. The soup form of the food is of great importance as also the advisability of preceding the flour soup with vegetable days for reasons which he enumerates. In the case of a woman of 42 with glycosuria for six years, on abstention from meat the sugar in the urine dropped from 14.3 to zero; then on 150 gm. oatmeal twice, the three following days 3.8, 10.5 and 5.8 gm. of sugar appeared in the urine, with traces of acetone. Then two equivalent amounts of wheat flour were given and the sugar and acidosis disappeared, but returned again after two oatmeal days, and the sugar kept at about 5 gm. notwithstanding the strictest abstention. Then equivalent amounts of a potato-flour soup were given and the sugar ran up from 6.5 to 19 gm. the first day and then dropped back to below the first figure, and by the fourth day the urine was entirely free from sugar. In two other severe cases oatmeal and inulin seemed to be borne better than the potato soup. He relates the details of dietetic treatment along these lines in four other cases to sustain his views.

Monatsschrift für Geburtshilfe und Gynäkologie, Berlin

May, XXXVII, No. 5, pp. 554-722

138 *Radiotherapy in Gynecology, Especially for Carcinoma of the Uterus. A. Döderlein.
139 *Heart Disease and Pregnancy. Fellner.
140 Peroneus Paralysis Following Delivery. C. Staude.
141 Vaccine Treatment of Gonorrhea in Women and Girls. H. Heymann and Moos.
142 Tardy Ileus after Vaginal Hysterectomy. A. Schütze.

138. **Efficacy of Radiotherapy in Gynecology, Especially for Carcinoma of the Uterus.**—Döderlein uses the technic advocated by Krönig, Gauss and Limbecke and to it attributes a great measure of his success. He reports thirty-two cases of myoma and hemorrhage with prompt and permanent benefit under radiotherapy and without any bad effects. The tumors entirely disappeared in many cases. More surprising still, he found a combination of Roentgen ray and mesothorium treatment effective in many cases of uterine cancer. Six cases are described and reproductions given of the microscopic picture before and after treatment. He thinks the rays had a direct effect on the carcinoma cells and not, as has been previously held, that the cancer cells were affected secondarily by contraction of the surrounding connective tissue. He also reports eight cases of unsuccessful treatment in cancers which had returned after operation.

139. **Heart Disease and Pregnancy.**—Fellner concludes on the basis of about 250 cases that heart disease is not an extremely dangerous complication of pregnancy. Its danger depends more on the condition of the heart muscle than on that of the valves. It is the birth that is to be feared, not the pregnancy itself, and abortion should be performed in cases where the mother has shown dangerous heart symptoms in previous labors. Also in heart disease complicated by tuberculosis, goiter or nephritis. Mitral stenosis demands active intervention also. The patients' circumstances should be taken into account in considering sterilization; working women cannot spare their hearts during pregnancy and should therefore be sterilized more readily than the well-to-do. Vaginal cesarean section was found a satisfactory procedure in a number of cases. Heart disease seems to be a frequent cause of menorrhagia.

Münchener medizinische Wochenschrift

May 20, LX, No. 20, pp. 1073-1128

143 *Elective Cultivation of Diphtheria Bacilli. (Ein neues Prinzip der elektiven Züchtung und seine Anwendung bei Diphtherie.) H. Conradi
144 Chemotherapy of Spirochete Disease. (Zur Chemotherapie der Spirochätosen.) G. Giemsa.
145 Local Thorium Treatment of Experimental Cancer. (Therapeutische Versuche mit lokaler Thoriumchloridbehandlung bei Karzinommäusen und Sarkomratten.) A. Caan.
146 *Direct Sunlight in Treatment of Bone and Joint Tuberculosis. (Lichtbehandlung der chirurgischen Tuberkulose.) O. Vulpius.
147 *Technic for Quantitative Determination of Urates in Blood Serum. Ziegler.

148 *Serodiagnosis of Pregnancy. (Zur biologischen Diagnose der Schwangerschaft.) B. Stange.
149 Differentiation of Convulsions by Blood Picture. (Die differentialdiagnostische Abgrenzung einiger Krampfformen durch das Blutbild.) P. Jödicke.
150 Infusion or Injection of Salvarsan. F. Zimmern.
151 *Comparative Thermometer Findings. (Vergleichende Temperaturmessungen und deren klinische Bewertung.) C. Stäubli. Commenced in No. 19.

143. **Improved Technic for Elective Cultivation of Bacteria.**—Certain bacteria seem to be attracted by hydrocarbons and cling to them and Conradi has utilized this property to sift out diphtheria bacteria as they float upward in a suspension and cling to a supernatant layer of benzin. Only those bacteria seem to be attracted in this way which have a fatty envelop, but this includes the important pathogenic types. A greased needle will rise to the surface of water and float. A loop of an agar culture of staphylococci and hay bacilli and a loop of diphtheria bacilli from a tellurium plate are placed in a test-tube which is then filled up with 10 c.c. of salt solution plus 2 c.c. of benzin. The tube is then plugged and well shaken and set aside for five minutes. On the lower surface of the benzin will then be seen grayish masses and flakes formed exclusively of diphtheria bacilli, the other bacteria still floating suspended in the fluid below. To differentiate diphtheria a swab from the throat is placed in a tube which is then filled with 10 c.c. of salt solution; 2 c.c. of benzin is poured on top and the whole well stoppered and shaken. The bacilli are taken from the benzin with a toothpick wound with cotton. The cotton is protected with a disk of filter paper, and cotton and filter paper are fastened to the stick with fine wire. When ready to use, the lower end of the stick is dipped into oil and then it is lowered into the benzin; at once the cotton sucks up all the benzin while the oiled disk does not take up any water or bacteria from the fluid below. The oil stick is thus a trap to take up the diphtheria bacteria with the benzin and leave the others untouched. The stick is then rolled back and forth on a tellurium plate until the plate is inoculated thoroughly with the bacteria. Conradi has found this method superior to all others he has tried for sifting out pure cultures of bacteria.

146. **Light Treatment of Bone and Joint Tuberculosis.**—Vulpius' experience seems to have demonstrated that practically as fine results can be obtained with exposures to the arc light or mercury lamp as to the direct sunlight, and at sea level as in the mountains. He reports surprisingly complete cures in numbers of cases, even in those which had resisted all other treatment for months and years. The pain and swelling subside, the suppuration dries up, and the lesion heals over while the stiff joint regains unhoped for movability. He mentions four sanatoriums in Germany, including his own near Heidelberg, where these principles are being applied in treatment of surgical tuberculosis without the necessity of an expensive trip and long sojourn far from home.

147. **Quantitative Determination of Urates in the Serum.**—Ziegler says that the technic he describes does away with the disadvantages of other methods, especially the disturbing residual nitrogen and the loss of some of the uric acid as it is absorbed into the coagulated albumin. His technic is based on the same principle as the Krüger-Schmidt method, namely, that copper sulphate forms an insoluble compound with uric acid and urates. This occurs, with complete precipitation of the urates, even when enough sodium hydroxid has been added to the fluid to keep the albumin in the serum from precipitating as the mixture is boiled and evaporated down to a third of its bulk. It is then centrifuged until the fluid is limpid; the sediment deposit is then treated with sulphuric acid which dissolves at once the copper urate compound and the amount of uric acid thus liberated is titrated with potassium permanganate. The test reveals down to 0.005 or 0.025 c.c. uric acid in 10 c.c. of serum.

148. **Serodiagnosis of Pregnancy.**—Stange states that positive findings were obtained in 100 per cent. of the seventy-three pregnant women tested with Abderhalden's technic.

151. **Comparative Temperature Measurements.**—The first part of Stäubli's article was summarized in abstract 47, p. 2070, last week. He has found that not only the tuberculous but persons with asthma and convalescing from wasting diseases as also the obese, the anemic and the neuropathic, are all liable to an unstable temperature in the rectum. A rise in the rectal temperature can be regarded as subfebrile only when it is accompanied by a rise in the temperature in the axilla. His research seems to show that the temperature in the rectum is dependent on the neighboring internal organs and the production of heat in the muscles, while the temperature in the axilla is the manifestation more of the heat-regulating processes.

Petersburger medizinische Zeitschrift

May 14, XXXVIII, No. 9, pp. 103-111

152 Disease of Accessory Nasal Sinuses. (Ueber Nebenhöhlenerkrankungen der Nase.) v. Rimscha.
153 Bulbar Paralysis. (Zur Kasuistik der bulbaren Erkrankungen.) H. Siebert.

Wiener klinische Wochenschrift, Vienna

May 15, XXVI, No. 20, pp. 781-824

154 Cultivation of Human Tumor Tissue outside of the Organism. (Zur künstlichen Kultur menschlicher Tumoren.) P. Albrecht and G. Joannovics.
155 Anaphylaxis. (Zur Frage der anaphylaktischen Vergiftung.) R. Kraus and P. Kirschbaum.
156 Avian Tuberculosis in Man. (Vorkommen von Geflügel-Tuberkulose beim Menschen.) E. Löwenstein.
157 Small-Pox and Typhus in Bosnian Refugees. (Variola- und Flecktyphusstudien an den bosnischen Rückwanderen aus dem Balkan.) L. Arzt and W. Kerl.

Zentralblatt für Chirurgie, Leipsic

May 24, XL, No. 21, pp. 809-848

158 *Application of Extension to Fracture of the Heel and Middle Portion of the Foot. (Extensionsbehandlung bei Calcaneusfraktur und den Verletzungen der Mittelfussknochen.) Gelinsky.
759 *Operative Treatment of Paralyzed Feet. (Zur Operation gelähmter Füsse.) E. Müller.
160 *Phenol-Camphor in Joint Disease and Cold Abscesses. (Ueber Phenolkampferbehandlung verschiedener, auch tuberkulöser Gelenkerkrankungen und kalter Abszesse.) F. Pohl.

May 31, No. 22, pp. 849-896

161 Blocking the Brachial Plexus. (Zur Anästhesierung des P. brachialis.) D. Kulenkampff.
162 The Phrenic Nerve from Clinical and Surgical Standpoints. F. Oehlecker.
163 Fascia Flap to Close Fistula into Stomach. (Operative Verengerung der Magenfistel mittels freier Fascienplastik.) V. v. Hacker.

158. **Application of Extension to Fracture of the Heel and Middle Part of the Foot.**—Gelinsky gives an illustrated description of the technic which he has applied with great success, reporting a typical case in detail.

159. **Operative Treatment of Paralyzed Feet.** — Müller describes his technic for operating on a paralyzed pes calcaneus and also for making an arthrodesis in the talotarsal joint with paralysis of the muscles.

160. **Phenol-Camphor in Treatment of Cold Abscesses, Etc.**—Pohl's experience has amply confirmed, he says, the statements of those who called attention to the way in which camphor seems to annul the corroding action of phenol. He used it in the formula 30 parts phenol, 60 parts triturated camphor and 10 parts alcohol, injecting this mixture directly into the lesion in cases of old rebellious effusions and destructive inflammatory processes in joints, and recurring rheumatic joint affections displaying a tendency to develop into arthritis deformans. In the course of the three years since he has been doing this he has even come to use this treatment for acute suppurative processes in joints and for articular rheumatism. The results were always strikingly good except that general sepsis did not seem to be influenced by the injections. He has had only two cases of this latter type; one patient died. In both cases the temperature dropped decidedly after the phenol-camphor injections. He has given the injections at intervals of two, four or eight days to a number of patients, never going above the dose of 2 up to 5 c.c., and except for slight carboluria has never witnessed any by-effects. There does not seem to be any reaction in a sound joint, but an inflamed joint swells and may become very painful, requiring

application of ice or aluminum acetate; sometimes it may be necessary to draw off some of the effusion. The second injection induces merely a slight reaction, and the third scarcely any at all. The reaction is the more pronounced in the chronic cases. He calls attention in particular to a case of tuberculous caries of the ribs in which, after nearly a month's treatment with iodoform-glycerin, the process seemed on the point of breaking through. After three injections of the phenol-camphor and aspiration of the exudate, the process retrogressed and there was no visible evidence of its presence two weeks later.

Zentralblatt für Gynäkologie, Leipsic

May 24, XXXVII, No. 21, pp. 757-796

164 *Cesarean Section in Russia. N. Pobedinsky.
165 Care of Stump of Umbilical Cord. (Einfache chirurgische Versorgung des Nabelschnurrestes.) B. Nardory.

May 31, No. 22, pp. 797-836

166 Tendency to Uterine Hemorrhage Arrested by Radium Emanations. E. Opitz.
167 Apparently Normal Delivery with Total Paralysis of the Trunk from Spinal Tumor near Atlas. J. Schottlaender.

164. **Cesarean Section in Russia.**—Pobedinsky states that up to 1885 only three instances are on record of recovery of the woman after cesarean section in Russia. Since then the operation has been done in 446 cases; in the decade before 1900 the mortality was 6 per cent., and since then 6.6 per cent. of the 288 patients treated by the classic technic. It was applied three times on three women, one of whom succumbed at last, and twice on thirty-two. The operation was done in thirty-nine cases because the diameter of the pelvis was 6 cm. or below, and in 222 cases less than 8 cm. Cesarean section is generally done as a prophylactic measure, when the pelvis is too contracted for hope of normal delivery; thus before labor has set in.

Policlinico, Rome

May 25, XX, No. 21, pp. 733-768

168 No Influence Apparent from Preventive Serum Enema on the Symptoms of Anaphylaxis. (Il valore del clistere preventivo sui sintomi d'anafilassi.) G. Lagana.

Riforma Medica, Naples

May 10, XXIX, No. 19, pp. 505-532

169 *Test for Hyperchlorhydria. (Osservazioni sopra una reazione personale atta a dimostrare un eccesso di HCl nel succo gastrico.) A. Cipollina.

May 17, No. 20, pp. 533-560

170 Operative Cure of Abscess in Lung during Typhoid. (Ascesso polmonare sopravenuto lungo il decorso di ileo-tifo.) D. Giordano.
171 Kala-Azar at Rome. (Nota clinica su alcuni recenti casi di leishmaniosi interna.) G. Spagnollo.
172 Anatomic Changes Induced by Intramuscular Injection of Salvarsan. B. D. Favera. Commenced in No. 19.
173 Chloroform or Ether? C. Salvetti. Commenced in No. 16.

169. **Color Test for Hyperchlorhydria.**—Cippolina's hypochlorite test was described in THE JOURNAL Sept. 21, 1912, p. 978. His further experience, he says, has confirmed the reliability and sensitiveness of the technic. It is particularly useful from the fact that the color reaction occurs with different acids only at different concentrations, and thus each acid can be tested for separately in the same test-fluid.

Hygiea, Stockholm

April, LXXV, No. 4, pp. 321-416

174 *Gastric Ulcer. (Några ord om diagnosen och terapien vid ulcus ventriculi.) K. Petren.
175 *Mercury in Air in Scientific Institutions, etc. A. Blomquist.
176 The Appendix in Hernia. (Några ord om appendix och appendicit i bräcksäck samt appendectomi vid radikaloperation af ljumsk—och kruralbräck.) L. Norrlin.
177 Bile Peritonitis without Perforation of Bile Passages. (Om gallperitonit utan perforation af gallblåsa eller gallvägar.) S. Johansson.

174. **Gastric Ulcer.**—Petren has been impressed with what he calls the discontinuousness of the symptoms in his hundred cases of gastric ulcer during the last two years. He knows of no other stomach affection with periods of absolute freedom from all disturbances on the part of the stomach, these symptomless periods sometimes longer than those with symptoms. With chronic gastric catarrh there are frequently periods of more or less remission of symptoms but never with the absolute vanishing of all symptoms, as with ulcer. The connection between the pains and the presence of food in the stomach and the complete cessation of the pain when the patient vomits, are also characteristic for ulcer. He regards systematic examination of the stools for invisible blood as indispensable, and he does not allow the patient to get up until the findings are constantly negative. If the Weber test findings are still positive after the third week of treatment, he stops all food for a day and then recommences the dieting course anew from the beginning, hastening a little the progress toward solid food. If then there are still traces of invisible blood in the stools he recommences the course for the third time. If the findings are still positive at its close he advises operative treatment. He does not approve of the methods of dieting in vogue but he has been much pleased with the results of the dietetic technic he has worked out. The patient fasts the first day; is given 172 calories the second; 344 the third; 688 the fourth, up to 1,908 the seventh day, thus reaching a higher total than even with the Lenhartz diet (1,588 calories the seventh day). He restricts the patient at first to cream plus three parts sweet milk (cream with from 15 to 18 per cent. fat content). A spoonful is given every hour the second day; every half hour the third day; two every half hour the fourth day, up to a total of one or two liters as the patient prefers. The second week he allows oatmeal gruel, made with water or milk, and a little butter. The third week he allows eggs and porridge, preferring to give the eggs raw. During the third week if all is going well he gives meat scraped raw and browned. Not until the end of the third week does he allow bread and butter and cooked eggs. Milk and cream do not stimulate gastric secretion while they contain fat. Nutrient enemas may prove useful in exceptional circumstances, especially when cream is used for the enema with addition of pancreas extract to predigest it, and it is given by the drop proctoclysis technic. He gives the tabulated details in regard to the weight before, during and after the course of treatment of ninety-nine patients; among the thirty-seven with invisible blood in the stools, twenty-nine increased in weight and forty among the sixty-two whose stools were always free from blood. The average of the increase was about six pounds, showing that his diet supplies sufficient nourishment. He protests vigorously against permitting food at once after serious gastric hemorrhage. The only drugs he uses are bismuth and extract of belladonna; the latter reduces the irritability of the vagus which he believes has something to do with ulceration in the stomach.

175. **Mercury in the Urine of Persons Handling Mercury.**—Blomquist reports several cases of chronic mercurial poisoning among the research workers and attendants at the scientific institutes connected with Swedish universities. Quite large proportions of mercury were found in the air and dust; the urine of persons who had been there for four years or more showed as much mercury in the urine as if they had taken nine courses of mercurial inunctions, four immediately preceding the examination. He also found mercury in the urine of dentists who had been working with amalgam fillings containing mercury; one dentist had 3.4 mg. to the liter of urine. Blomquist found further large amounts of mercury in the air and dust in the torpedo rooms, etc., of the navy department but there did not seem to be any appreciable intoxication among the individuals working there, probably because the sulphur and other metals currently used there formed harmless combinations with the mercury.

Ugeskrift for Læger, Copenhagen

May 22, LXXV, No. 21, pp. 869-928

178 Scotoma from Watching Eclipse. (Scotoma helieclipticum. Forholdene i Danmark under Solformørkelsen 17/4 1912.) K. K. K. Lundsgaard and H. Rønne.
179 Study of Normal Human Blood. (Undersøgelser af normale Menneskers Blod.) V. Bie and P. Møller. Commenced in No. 20.